

THE ULTIMATE GUIDE TO ChatGPT

Prompt like a pro and get the best out of the world's most popular AI

Start a
business

132
pages
of expert
advice

Build your
family tree

Your own 24/7
Personal Assistant

Generate amazing
AI images

+ Create
your own
chatbots

Get apps
written for you

Become an Excel
spreadsheet genius

WRITTEN *by* HUMANS



for HUMANS

AN INDEPENDENT PUBLICATION





Welcome to the AI revolution



Almost everyone who comes into contact with ChatGPT is blown away by how smart it is. But having asked it to write a personalised birthday greeting in the style of Shakespeare, or got it to draw a picture of a badger playing snooker, most people want to know: how

can ChatGPT make an actual difference to my life?

That's what this guide is here to answer. Over the following 130 pages, we will reveal dozens of ways in which you can put ChatGPT to practical use. Whether that's through help with running your business, creating a fully automated smart home, or bringing your ideas for apps to life, we'll show you how ChatGPT can make a difference.

One of the great strengths of ChatGPT is that it's both able to break down complex tasks into digestible Plain English, or even – in the case of writing computer code, for example – do the job for you. However, you still need to know how and where to find the various ChatGPT tools that make these amazing features happen.

You also need to be able to craft the prompts that give you the best possible chance of achieving the desired output. So not only will you find an entire section of this guide dedicated to polishing your prompting techniques, you'll also discover sample prompts sprinkled throughout. You'll see them highlighted in colour with a little chat bubble in the top-left corner.

AI is an incredibly fast-moving industry, with new features constantly being added to ChatGPT. And so far, these changes have only served to improve it. As such, not only can you be confident that ChatGPT will do everything we've featured in this guide, you can be sure that there's plenty more to come, too.

Barry Collins
Editor

THE ULTIMATE GUIDE TO ChatGPT

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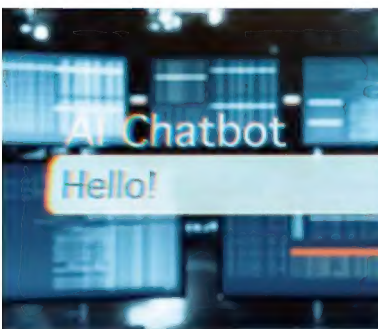
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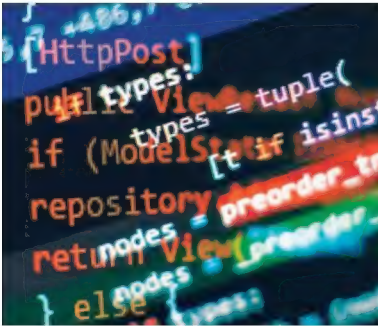
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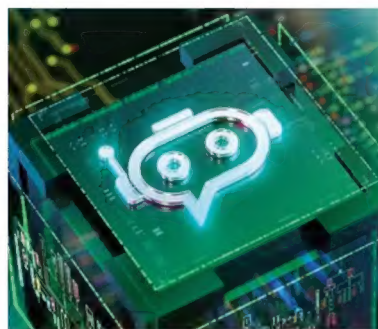
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What is Chat GPT?

ChatGPT appears to be able to answer any questions you ask it, plus write content, translate languages and plenty more. Here, we reveal the source of its “intelligence”, and whether you can trust its responses.

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How does ChatGPT work?

Before we learn how to master it, let's explore how ChatGPT actually works



When you hear the phrase artificial intelligence (AI) and come across services

such as ChatGPT providing perfectly good answers to plain English questions, it's easy to believe that computers have learned to think as humans do. This isn't the case, however.

ChatGPT isn't able to understand in the way humans do. It doesn't possess awareness or knowledge in the traditional sense. Instead, it processes vast amounts of data to generate responses based on patterns, making it highly effective at tasks, but without truly "knowing" anything.

This doesn't make what it does any less impressive, but if you can grasp how it works then you can begin to understand its strengths and weaknesses. Let's dig a little deeper into what happens when you ask ChatGPT to do something.

PATTERN RECOGNITION

As we'll explore, ChatGPT is trained on multiple millions of pages of text: books, websites, newspaper articles and more.

Having consumed all that written data, the AI is able to spot patterns. For example, when you see the words "we wish you a merry Christmas and a...", you instinctively know that the next three words are likely to be "happy New Year". Well, services such as ChatGPT do likewise, except on a much larger and far more sophisticated scale.

So when you type in a prompt such as "explain the health benefits of cod liver oil", the chatbot looks at what you've entered and then bases its response on what it has learned from the gazillions of pages it's guzzled up during training. It isn't just copying and pasting the information from other sources, though; it's forming fresh output based on the norms of English language and the knowledge it's gleaned from the training data.

How did Scotland's men's football team get on last night?



Searched 3 sites

Scotland's men's football team had a tough night on September 5, 2024, as they lost 3-2 to Poland in their UEFA Nations League opener at Hampden Park. Scotland fought back after being 2-0 down at halftime, with Billy Gilmour scoring just 23 seconds into the second half and Scott McTominay leveling the game later on. However, a late penalty in stoppage time, converted by Nicola Zalewski, handed Poland the win after a foul by Grant Hanley in the box.

Despite the loss, Scotland showed resilience, but the result was a disappointing start to their campaign (FootballCritic) (The Independent).



ChatGPT draws on a vast bank of data to respond to your prompts.

CONSTANT REFINEMENT

The AI technology being used by ChatGPT is being constantly refined and has so far improved with every iteration. Every new iteration of the "large language model" (we'll explain this term further overleaf) being used by ChatGPT uses a bigger set of training data to deliver more accurate results. As a rule of thumb, the more training data that goes in, the better the results that come out.

ChatGPT is now also able to search the internet to bring its knowledge up to date. A year or so ago, if you asked ChatGPT to name the prime minister of the United Kingdom, it might have responded with an answer such as "the prime minister is Boris Johnson, as of my last training data update in March 2022", even though Johnson was no longer PM.

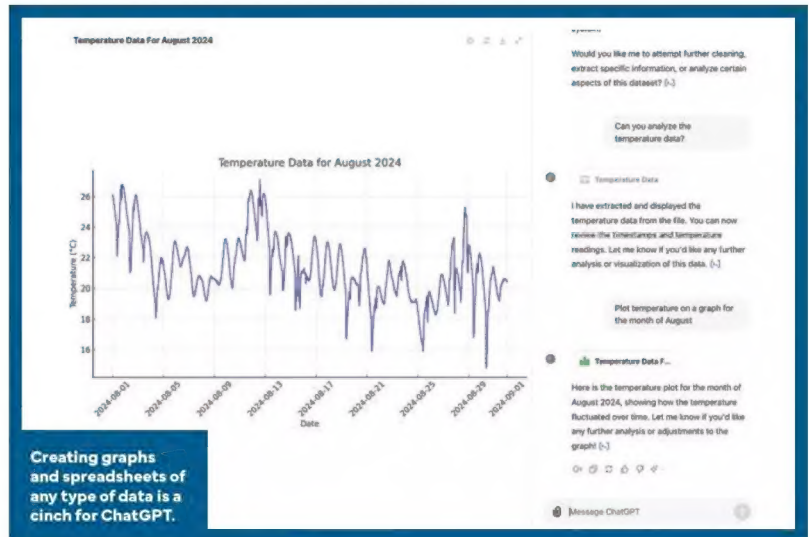
Now it's able to scour the web for such information, just as you or I might search Google for an answer. Consequently, if you ask ChatGPT "how did Arsenal do last night?", it should find the correct score and other details of the game if they played the night before. But bear in mind the accuracy of this information is only as strong as the web sources it's managed to find, which ChatGPT should name.

BEYOND TEXT

Nowadays, ChatGPT can do much more than provide straight text answers. It can draw graphs, provide data in spreadsheet form, or deliver summaries of long documents that you've uploaded to the service (note: some of these features are for paying subscribers only).

However, once again, the AI has no real understanding of the tasks it's being asked to perform here. It's learned how to carry out those tasks because it's seen so many examples of how they've been done in the past from its training data.

So, for example, if you upload a spreadsheet listing of all your company's hardware sales for the past month and ask the AI to work out which products were most popular on different days of the week, it will almost certainly do it. But it doesn't really know what days of the week are, or what a screwdriver is, in the same way a human staff member would. It performs such a task by making logical predictions based on what it's seen before. In other words, the AI is incredibly powerful – far more efficient at completing certain tasks than a human. But it has less raw intelligence than a woodlouse.



The AI is far more efficient at completing certain tasks than a human, but it has less raw intelligence than a woodlouse

WHAT ABOUT PICTURES?

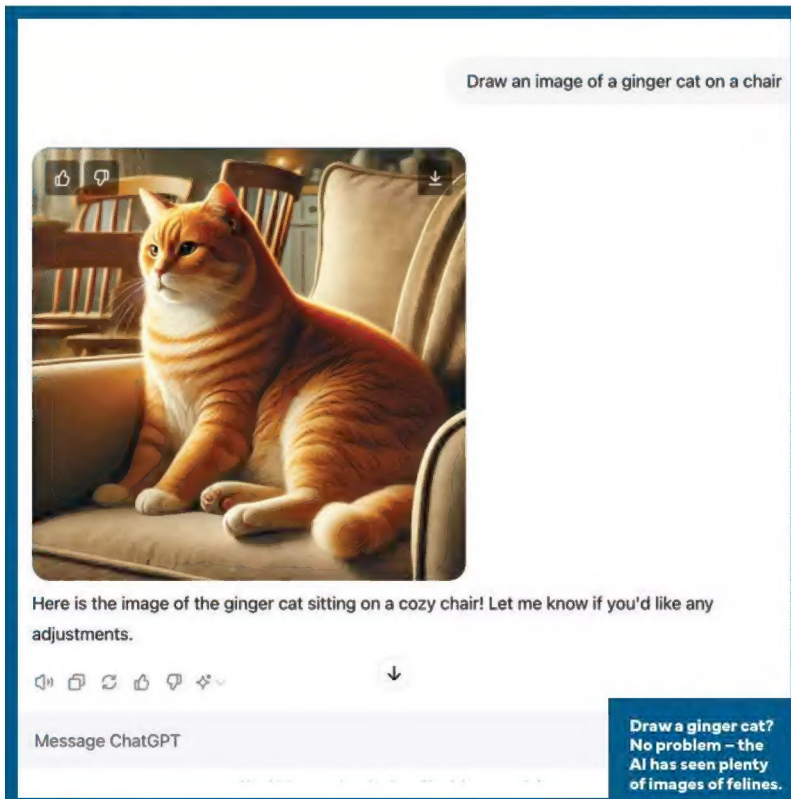
ChatGPT doesn't only deal in words and data, it also delivers images and video, using OpenAI's DALL·E model. This works in a slightly different way to text generation, but it's still pattern matching.

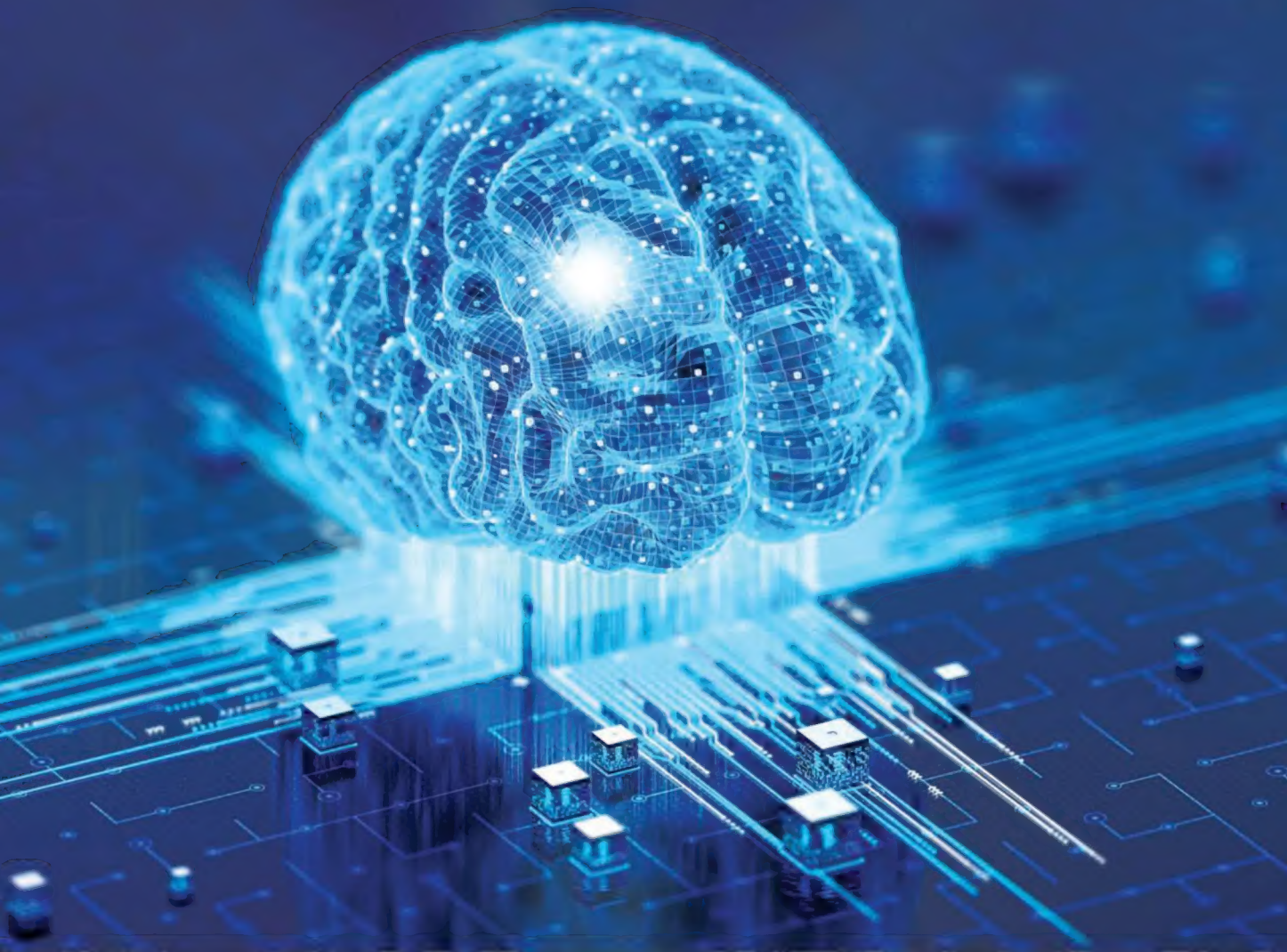
ChatGPT can draw you an image of a ginger cat sitting on a chair, because it's been trained on a gazillion images of cats (they're quite popular on the internet, you know) and chairs, and so knows what those elements should look like.

It then uses a "diffusion model" to create the image. Here, it starts with an image that's pure random noise – a fuzzy image that looks like the interference you'd see on old TV sets – and then slowly refines the image by removing noise, step-by-step, until the image fits the description of what you've asked for.

On some AI services, such as Midjourney, you can actually see this process in action, with the generated picture becoming gradually clearer as the AI does its work. With ChatGPT, you only get to see the final image.

Video works in a similar way, but because each video frame must be rendered individually, this requires an awful lot more processing power and time to generate. 🐱





How ChatGPT is trained

Find out how AI models are trained and from where they get their information



As with any job (except, oddly, running the country), you're not simply handed your security pass and told to get on with it. You need proper training.

AI isn't trained by being shown a few PowerPoint slides and a health & safety video, however. It's trained using vast quantities of text that are gathered from a wide range of sources, including the open internet. As such, it's possible that something you've typed into an internet forum has been used to train ChatGPT – and, before you ask, no, you're not getting paid for it.

Let's take a closer look at the so-called large language models (LLMs) that AI services such as ChatGPT are built on and the type of training data used.

LARGE LANGUAGE MODELS

LLMs are the basis of AI services such as ChatGPT, which have shot to prominence over the past few years.

An LLM is essentially an AI program that can read and generate text of its own, having been trained on millions of pages of reading material. That material can come from books, newspapers, academic papers and websites, among other sources (more on this below).

LLMs can effectively teach themselves to read, using a process called deep learning. This is modelled on the human brain, processing data through layers of “neurons”, enabling the system to learn complex patterns from the training data.

The LLM is essentially given a few basic rules of how language works, and then trains itself to recognise patterns and subtleties in language – such as tone, idioms and humour – from the vast corpus of text it's been fed. It's corrected as it goes along by its programmers, and eventually by users like you and me, who provide feedback on the answers the AI provides, helping it to understand what it's getting right and wrong.

Modelled on the human brain, an LLM forms the basis of how ChatGPT works.

THE GPT VERSIONS

The LLM that ChatGPT uses is called GPT. Confusingly, OpenAI also calls the personalised chatbots that you can make with ChatGPT “GPTs”, too (see *Build your own chatbots*, p110).

The third major version of GPT, GPT-3, released in late 2020, was the iteration that suddenly transformed ChatGPT into a household name. GPT-3 boasted 175 billion parameters, compared to the 1.5 billion parameters in its predecessor. Parameters are the individual weights and biases that a neural network learns during training.

This basically meant that GPT-3 was capable of delivering more coherent, human-like answers than anything that had gone before it. It also gave the AI a much greater ability to perform tasks that it hadn't been specifically trained to do. This backfired on a few occasions when GPT-3 became widely used, with people using it to cheat anti-spam systems or even to fool ChatGPT into breaking its own safety rules.

At the time of writing, we're now on GPT-4o, an enhanced version of GPT-4 that's able to deliver answers more quickly than its predecessor. There's also GPT-o1, which is much better at human-like reasoning.

ChatGPT users can still access previous GPT versions, so in the unlikely scenario that a new release damages the accuracy or speed of the answers provided, you can always revert to a previous model.

OpenAI also provides what's called an application programming interface (API) for the various GPT versions, allowing you to build your own AI tools using the same underlying technology as ChatGPT. We'll cover this more in the final section of this guide on p122.

TRAINING DATA

So, which texts is ChatGPT trained on? Well, the precise details are a closely guarded secret. You can't, for example, visit the OpenAI website and see a list of books that were used to train the AI.

The company has revealed that its LLM has been trained from a variety of sources, which include:

- Books
- Academic papers
- Newspapers and magazines
- Websites, such as Wikipedia
- Online forums, such as Reddit
- Computer code repositories

In some instances, these training texts are licensed from their publishers. In others, the data is scraped from the public internet.

As noted previously, LLMs are voracious readers. As such, the more training data they have, the better they become. So OpenAI is regularly striking new licensing deals to ensure it has fresh training texts to feed its next-gen GPTs.

For example, in April 2024, OpenAI signed a deal with the *Financial Times* to both train its AI on the newspaper's archived content and to secure a fresh stream of news articles every day.

There are some potential pitfalls to the way that OpenAI obtains its training data, though. While you can be pretty confident that the material in books from well-known publishers and newspapers such as the *Financial Times* is accurate, correctly spelt and grammatically sound, the same can't be said for that found on public internet forums, where any idiot with a keyboard can contribute.

OpenAI can apply different weightings to the training data, telling the AI to trust some sources more than others; but sourcing data from the public internet means that the AI can pump out false information. Sometimes, dangerously false information, as we'll discuss in more depth on the following page. 🗯

The screenshot shows the Wikipedia page for ChatGPT. A text box on the left states: "Training texts include data from the public internet, which isn't always reliable." The main content area includes a summary of ChatGPT as a chatbot and virtual assistant developed by OpenAI, launched on November 30, 2022. It mentions that ChatGPT is based on large language models (LLMs) and enables users to refine and steer a conversation. A table on the right provides details about the model's development, release, and platform availability.

Property	Value
Developed by	OpenAI
Initial release	November 30, 2022; 21 months ago
Stable release	July 18, 2024; 58 days ago
Engines	GPT-4, GPT-4o, GPT-4o mini
Platforms	Cloud computing platform, Ubuntu
Type	Virtual assistant, conversational model, generative pretrained transformer
License	Proprietary license, ChatGPT.com

An LLM is given a few rules on how language works, and then trains itself to recognise patterns and subtleties in language from the text it's fed

Strengths and weaknesses of ChatGPT

AI chatbots are stunningly good, but they're far from infallible



It's hard not to let your jaw smack against your keyboard's spacebar when you first use ChatGPT. Its seeming ability to answer everything and anything is astounding.

Ironically, that's also one of its weaknesses. The AI is like a blowhard politician – it doesn't like to admit it's wrong, nor that it doesn't know something. Even when it's

spectacularly wrong, it can be so with infuriating confidence that it's right.

Here, then, are the strengths and weaknesses of ChatGPT, and on the next page we'll reveal how to mitigate some of the risks.



STRENGTHS

Phrasing doesn't matter

Unlike Google, it doesn't matter how you put a question to ChatGPT. It has a remarkable ability to work out what you mean, even if you don't express it perfectly, or include typos. What's more, you can ask follow-up questions or seek clarification if you didn't understand the initial response. Think of it more as a conversation with your smartest colleague, rather than a search engine.

It batters through long documents

If you've been emailed a 35-page report at 10pm that you need to read before a 9am meeting tomorrow morning, or an Excel file with more sheets than a Premier Inn, ChatGPT really is your friend. You can upload the doc to ChatGPT and ask it to summarise the contents or ask questions about its contents, and it will spit out the answers in seconds. The AI is also far more reliable when you're asking it questions about a specific document you've uploaded. It's far less likely to hallucinate an answer (see *Weaknesses*, right).

An answer for everything? It can seem that way – but isn't always the case.

You can create your own chatbots

ChatGPT Plus subscribers can create their own chatbots (called GPTs), dedicated to a specific task or trained on a specific set of documents. For example, you can upload the owner's manual for your car and ask a GPT maintenance questions, or upload your company's product catalogue and ask a GPT questions about the products you sell to help customers. We'll provide a step-by-step guide to setting up GPTs later in this guide.

It remembers stuff about you

This is a relatively new feature, but ChatGPT can recall snippets of information about you and tailor answers accordingly. For example, when I asked ChatGPT what it remembers about me, its first answer was "You work in the UK and you're a tech journalist", among other details it had picked up from previous conversations.

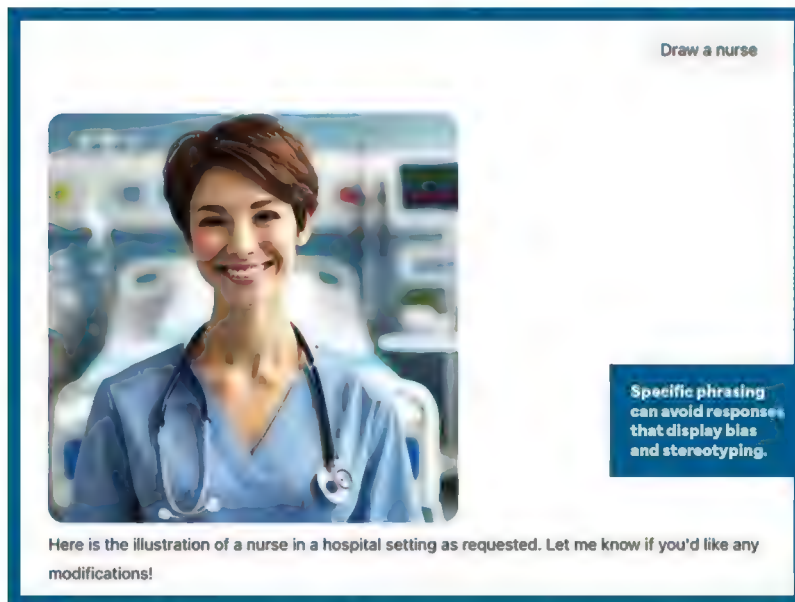
You can tell ChatGPT snippets of information about yourself by going to Settings > Personalisation. If you find that a bit creepy and don't want the AI logging stuff about you, then you can switch off the memory feature from here, too.

WEAKNESSES

It gets dumb stuff wrong

The AI can be both the smartest genius since Stephen Hawking and as dumb as a Rich Tea biscuit in the same conversation. It can get rudimentary questions wrong. In the screenshot on the right, for example, you'll see that it thinks that the letter R appears twice in the word "ridiculous".

This can massively undermine confidence in the AI's answers – but glaring mistakes such as this can be minimised if you learn how to phrase questions properly, or avoid the known blackspots in the AI's abilities. We'll steer you round many of these during the course of this guide.



Built-in biases

AI may give answers that display bias or cultural stereotypes, largely because this is what it's been fed in its training data. To give two very rudimentary examples: ask ChatGPT to draw a nurse, and it's likely to depict a female, as you can see above. When asked "what was West Ham's last result?", the AI assumed I was asking about the men's football team, not the women's. Again, you can often work around such biases (asking for the women's results specifically, for instance), but you may rightly feel that you shouldn't have to.

Hallucinations

Aside from getting stuff wrong, ChatGPT can also make stuff up and present it as fact. This might be because the training data was inaccurate (remember, we told you it was partly trained on information from internet forums? You might want to sit down, but people on the internet occasionally get stuff wrong.) It might be a random glitch. But you shouldn't take as read any factual information the AI delivers, particularly when it comes to sensitive topics such as health advice or financial guidance. We'll cover ways to minimise such hallucinations on the next page.

It doesn't know what it doesn't know

ChatGPT is that guy down the pub who looks over your shoulder, telling you what answers to press on the quiz machine. It thinks it's smarter than it is. Actually, it doesn't think at all. It's a large language model, it doesn't know its limits. It may try to give an answer to questions that are beyond its comprehension.

It likes a nap

ChatGPT has definitely grown more reliable, especially since the early surge in users, but it can still suffer periods of downtime or unresponsiveness. If you're not a paying subscriber, you go to the back of the queue during periods of peak demand. As such, it would be unwise to not have a contingency plan if you were building a professional workflow using ChatGPT. 🛑

AI risks and how to beat them

There are ways to work around some of ChatGPT's flaws



Nothing works perfectly every time in the tech industry, and AI chatbots are certainly no exception. As we've discussed on the previous page, there are several flaws with ChatGPT, particularly when it comes to the accuracy of the information it provides.

Without doubt, the accuracy of AI tools is improving, and ChatGPT has already come on leaps and bounds in the couple of years since it's been in the public domain. But there are also prompting techniques that you can apply to get better quality results, or to work out from where the AI is getting its information. Here, then, is how you can avoid some of ChatGPT's biggest pitfalls.

WORK THROUGH PROBLEMS STEP-BY-STEP

One common mistake that people make with AI is to issue a flurry of requests/commands at once, which can create erratic or unexpected results. While ChatGPT is capable of interpreting long prompts, the likelihood of something going wrong increases

with the more you ask it to do in a single prompt. This is partly because of the way ChatGPT limits output to prevent heavy users overwhelming the service. Each response is allocated a certain number of "tokens" – the more you ask of the

AI in each prompt, the more tokens you consume, which can mean that part of the job is omitted. For example, let's say you've uploaded a spreadsheet showing your 5k run times for the past year. You could enter a prompt such as:

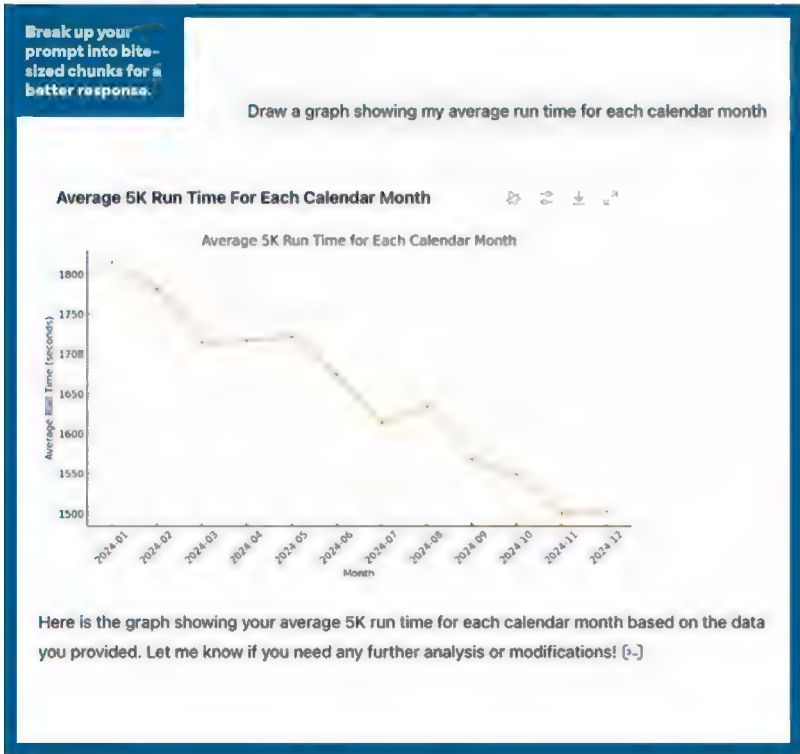
.....
Draw a graph showing my average run time for each calendar month. Also work out my median run time for each month, and produce a table ranking the months in order, from fastest median run time to slowest.
.....

ChatGPT is capable of all of these tasks, and might well deliver exactly what you've asked from this one prompt, but it's far more likely you'll get what you want by breaking this up into separate requests and letting the AI respond to each before moving onto the next.

.....
Draw a graph showing my average run time for each calendar month.

Work out my median run time for each month.

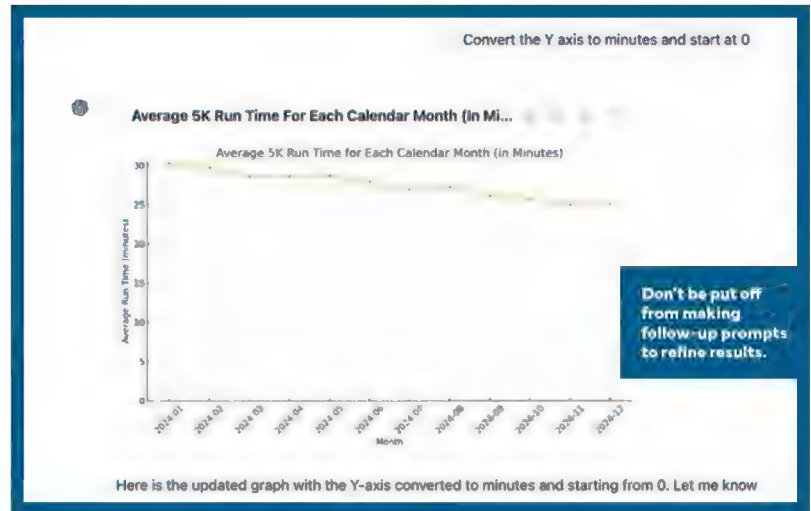
Produce a table ranking the months in order, from fastest median run time to slowest.
.....



IF AT FIRST...

Don't throw in the towel if you get erratic or unexpected results the first time. For example, in the graph on page 14, you may notice the Y axis is listed in seconds not minutes, and it's not starting at 0, which gives a slightly false impression of the rate of the performance. You can ask the AI to make refinements in your follow-up prompts.

Convert the Y axis to minutes and start at 0.



Who is the current chief whip of the Labour party in the UK? Check your answer online.

Searched 4 sites

The current Chief Whip of the Labour Party in the UK is Sir Alan Campbell MP. He was appointed to the position of Parliamentary Secretary to the Treasury (Chief Whip) in July 2024 (Wikipedia) (GOV.UK).



To ensure accurate responses, ask ChatGPT to check its answers.

FORCE THE AI TO REVEAL ITS SOURCES

If you've asked the AI a question and it's delivered a factual answer, you can ask ChatGPT to name its source for that information. This allows you to gauge whether or not the chatbot is using reputable sources.

You can either ask as part of the prompt or after it's delivered the answer. For example:

What is the population of Papua New Guinea? Name your sources

With this prompt, ChatGPT should list the sources it used at the end of the answer, perhaps providing links to a specific source.

If you see "searched X websites" above the answer (X being a specific number it gives), then you can also click that link to see which websites it searched during its research. [us](#)

CHECK IF IT "UNDERSTANDS"

Another way to minimise the risk of errors or the AI misinterpreting what you've asked it to do, is to ask if the AI understands at the end of a prompt. You don't need to do this with every prompt, but if it's a complex prompt that could be interpreted in a variety of ways, it's worth checking if the AI has got the gist. For example:

I want you to write a basic set of instructions, showing new starters at my company how to add the company logo to cell A1 of an Excel spreadsheet. Do you understand?

With this kind of command, the AI will often explain back to you what it's about to do before going on to complete the task. If the explanation is incorrect or it has misunderstood, it's easy to rectify at this stage, rather than wading through the full instructions and discovering a flaw.

ASK CHATGPT TO CHECK ONLINE

Another way to combat misinformation is to make ChatGPT do its homework properly and check its facts online. Recent versions of ChatGPT have the ability to search the public internet, so you're no longer confined to facts that are trapped in its dated training data.

Often the AI may choose to search online off its own bat, but you can force the matter with a prompt to ensure it's checking for up-to-date information. For example:

Who is the current chief whip of the Labour party in the UK? Check your answer online.

Alternatively, you can click the little world icon in the prompt bar then enter your prompt to search the internet. When it's completed the search, it will normally reveal the source of its answer at the end of the answer, which brings us neatly to...

For factual answers, you can ask ChatGPT to name its source for that bit of information

The different ChatGPT products

We reveal several ways to interact with the AI assistant



ou might think of ChatGPT as just a website, since that's the way most people stumble

across the AI assistant. However, there are now multiple ways to access ChatGPT or related services, each with their own strengths and weaknesses.

Here, we'll run through the different ways you can access and experiment with ChatGPT, so you can find the method that suits your needs best.

Bear in mind that the company is adding new products and services all the time, so keep an eye on openai.com for new AI product announcements.

CHATGPT (FREE)

The free version of ChatGPT does far more than it used to. You can access the latest AI model; it lets you upload files for analysis; and discover and use GPTs (customised chatbots) that have been created by other users.

In essence, you get most of the features that paying subscribers do, with the downside being that it's limited access. If there's heavy demand on the ChatGPT servers, free users will be the first to suffer, either getting very limited access or even none at all for a period.

Likewise, you can only issue a limited number of prompts per session before you hit a buffer and are prodded to upgrade. After a cooldown period, you can start using for free again.

Frustratingly, OpenAI doesn't specify what those limits are and they can fluctuate, so if you think you're going to be a regular user of ChatGPT after reading this, you might want to consider ChatGPT Plus.

Draw an image of a badger playing a banjo



To create an image of a tiger playing the tuba, you'll have to shell out for Plus.

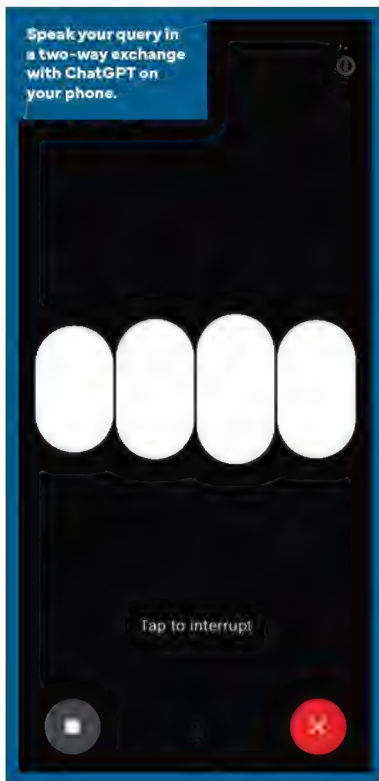
Here is the image of a badger playing a banjo in a whimsical forest setting! I hope it captures the charm of the scene you had in mind.

🗨️ 📄 🔄 🌟 🗑️

ChatGPT Plus

ChatGPT Plus takes the brakes off the AI service... for a price. Although you don't get unlimited access, even for the \$20 (about £15) per month subscription fee, you'd have to be using the service pretty heavily to hit a usage warning. We haven't managed to hit the limit once during the course of writing this guide, and we're obviously using it pretty heavily.

Paying for the service also unlocks a few features that you don't get with the free account. For example, image generation, and the ability to create and share your own custom chatbots (GPTs) is reserved for subscribers. Paying punters also get access to the new features first, so when ChatGPT is testing a new AI model, you'll likely get to tinker with it before the freeloading masses.



ChatGPT mobile

ChatGPT has a mobile app for both Android and iPhone smartphones. At the time of writing, Apple is also looking to build support for ChatGPT directly into iOS, so you may not even need to download the app to access the AI assistant.

ChatGPT's mobile app can be used by both free and ChatGPT Plus subscribers, but the reason we mention it separately is because it has a unique feature – the ability to hold a spoken conversation with the AI. In the app, tap the headphones icon and you can start chatting with the AI, with ChatGPT listening to what you say before responding in an eerily human-like manner. It's worth trying, especially if you have a reasonably long query that would take ages to type out.

CHATGPT TEAMS AND ENTERPRISE

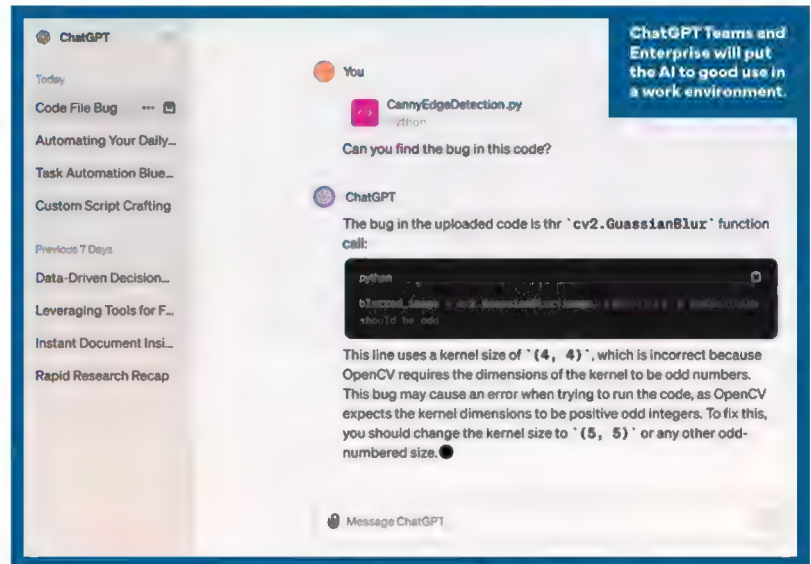
If you're using ChatGPT for work with colleagues, it might be worth looking into Teams or even Enterprise.

Teams is priced slightly higher than Plus at \$25 (about £19) per month, but brings additional benefits. You can create and share custom GPTs with your colleagues (and only your colleagues), there's an admin console for the boss to manage team members,

and there are higher usage limits than on Pro accounts.

There's a guarantee that your business data won't be used to train future versions of the AI, too, although you'll still need to tread carefully if using any sensitive or customer data with the AI.

Enterprise is aimed at bigger firms and is priced per client, after you've talked to OpenAI's sales team.



Your data won't be used to train future versions of the AI – although you'll still need to tread carefully with sensitive and customer data

THE API

The API is a very different way to access the AI engine (ie. GPT-4o) that powers ChatGPT. Instead of accessing the chatbot via the ChatGPT website or app, you can build it into your own apps or third-party apps.

For instance, Zapier.com allows you to create automations with ChatGPT, letting you do amazingly clever things, such as dictating an email to the AI and having it polish up the language and send it to a customer, for instance.

Likewise, there are all kinds of third-party apps, such as the Mac utility Raycast, which can access GPT-4o and let you chat away without having to visit

the website first. Or, there are WordPress plugins that let you build an AI chatbot into your own website.

This all sounds a bit complicated, but it's actually pretty simple. All you really need is an API key (a long string of letters and numbers) from OpenAI to get going. The tricky bit can be the payment model. Instead of paying a flat fee, you're charged per use, so you must take care not to run up enormous bills.

We'll dive into this in more detail in the final section of this book (*Take ChatGPT to the next level*, p122), but if you want to start exploring how the API works, visit openai.com/api. 📄

AI Chatbot

Hello!



Prompt like a pro

The quality of the results returned by ChatGPT will depend on the prompt input in the first place. Discover the tips and techniques that you can adopt to improve the AI's responses and get you exactly what you want.

-
-
- 20** **What is prompt engineering?**
.....
 - 22** **10 different prompting techniques to try**
.....
 - 26** **Avoid these prompting pitfalls**
.....
 - 28** **Develop your prompting skills**
.....

What is prompt engineering?

Take your first steps to mastering ChatGPT prompts

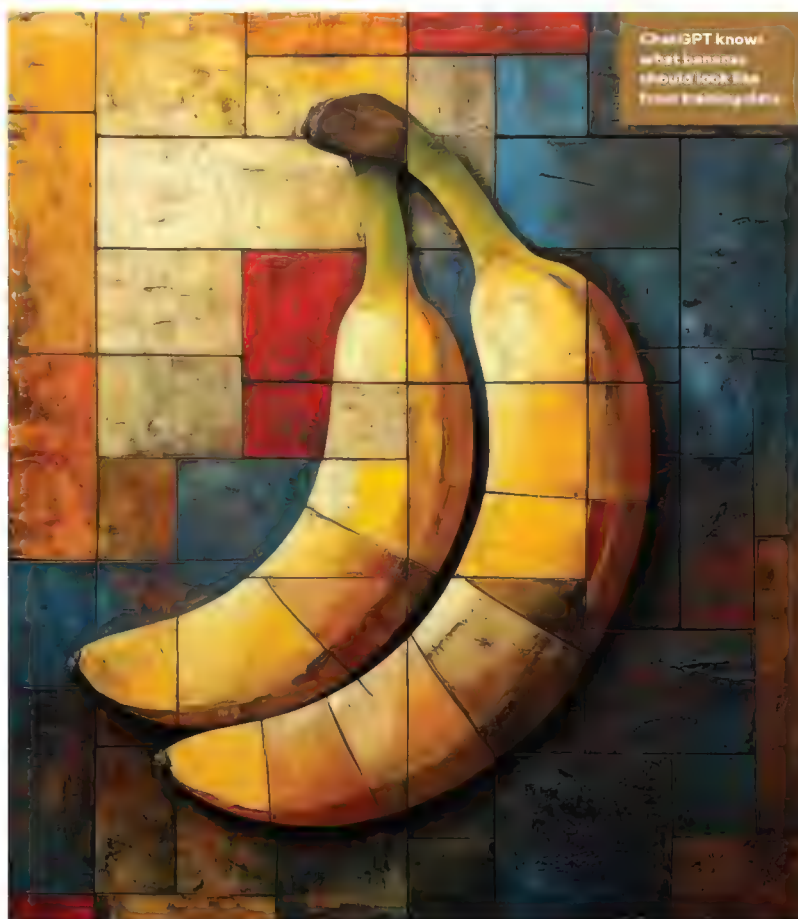


very technology adds new bits of jargon to our vocabulary and “prompt engineering”

is definitely AI’s contribution to the dictionary.

Prompt engineering is the skill of writing prompts that will generate the required response from the AI. It isn’t unique to ChatGPT, and each AI system may require you to apply subtly different prompt engineering techniques, although there are some shared principles that span the entire gamut of AI models.

The word “engineering” makes it sound complicated, akin to stripping down a car or knowing how a wind turbine works. In practice, it’s much simpler – it’s basically knowing how to write commands in plain English; there’s no reason to be intimidated. This section of the guide will arm you with all the techniques you need to become a proficient ChatGPT user.



THE BASIC PRINCIPLES OF PROMPTING

To ensure maximum chance of your prompts achieving the desired result, you should follow a few basic principles:

Clarity – your prompts should be clear and unambiguous. Although the AI often uses chatty language itself, try to keep your prompts as short and to the point as possible. Also avoid using slang or colloquial language that the AI may not fully understand.

Context – give the AI any necessary background information that could help it formulate the right answer. For example, if you were asking the AI to “write 250 words on Newton’s third law of motion”,

the output you’re after would be very different if you’re writing the material for a child’s textbook as opposed to a scientific journal. Giving the AI that context in the initial prompt will save you time with rewrites. It’s worth noting that ChatGPT can now remember facts about its users. So, for example, if it knows you’re a doctor, then its explanations of medical conditions may use more medical terminology than if it was aware that you’re an accountant.

Instructions – where possible, give the AI clear instructions on what you want to see. “Create a table showing...”, “List five pros and cons of...”, “In no more

than 300 words describe...”. If you have a specific output in mind, let the AI know beforehand. It’s not a mind-reader; at least, not yet!

Examples – ChatGPT is like a prodigious child, it “learns” from copying what’s gone before. It doesn’t know what a banana is, but it’s been trained on millions of photos of bananas, so it can recreate the visual characteristics of a banana when you ask it to draw one. Therefore, if you have a sample piece of text or image that you want the AI to adopt the style of, giving the AI that example is a good idea. We’ll show you how to do this on p22.

	A	B	C	D
1	Name	Term Start Date	Term End Date	Political Party
2	Robert Gascoyne-Cecil	12 Jul 1895	11 Jul 1902	Conservative
3	Arthur Balfour	11 Jul 1902	5 Dec 1905	Conservative
4	Henry Campbell-Bannerman	5 Dec 1905	3 Apr 1908	Liberal
5	H. H. Asquith	5 Apr 1908	5 Dec 1916	Liberal
6	David Lloyd George	7 Dec 1916	19 Oct 1922	Liberal
7	Bonar Law	23 Oct 1922	20 May 1923	Conservative
8	Stanley Baldwin	22 May 1923	16 Jan 1924	Conservative
9	Ramsay MacDonald	22 Jan 1924	4 Nov 1924	Labour
10	Stanley Baldwin	4 Nov 1924	5 Jun 1929	Conservative
11	Ramsay MacDonald	5 Jun 1929	7 Jun 1935	Labour
12	Stanley Baldwin	7 Jun 1935	28 May 1937	Conservative
13	Neville Chamberlain	28 May 1937	10 May 1940	Conservative
14	Winston Churchill	10 May 1940	26 Jul 1945	Conservative
15	Clement Attlee	26 Jul 1945	26 Oct 1951	Labour
16	Winston Churchill	26 Oct 1951	6 Apr 1955	Conservative
17	Anthony Eden	6 Apr 1955	10 Jan 1957	Conservative
18	Harold Macmillan	10 Jan 1957	19 Oct 1963	Conservative
19	Alec Douglas-Home	19 Oct 1963	16 Oct 1964	Conservative
20	Harold Wilson	16 Oct 1964	19 Jun 1970	Labour
21	Edward Heath	19 Jun 1970	4 Mar 1974	Conservative
22	Harold Wilson	4 Mar 1974	5 Apr 1976	Labour
23	James Callaghan	5 Apr 1976	4 May 1979	Labour
24	Margaret Thatcher	4 May 1979	28 Nov 1990	Conservative
25	John Major	28 Nov 1990	2 May 1997	Conservative

This table took some back and forth, but it could have taken just a single prompt.

ITERATING YOUR PROMPTS

A key aspect of prompt engineering is learning what works for you. If a prompt didn't return the desired result, don't just ask the AI to "try again". Analyse your prompt and evaluate why you didn't get the response you required.

Of course, with ChatGPT it isn't a one-shot game. If you're using an image service such as Midjourney, for example, you write one prompt and out pops four possible images. There's almost no scope to have a discussion with the AI about the bits you like and the bits you don't.

With ChatGPT, however, you can provide feedback. If a piece of text you've asked the AI to write is too stiff and formal, you can ask it to try again, but make the tone more friendly. If you ask for a picture of a labrador, and it returned a beige lab instead of a black one, you can ask the AI to change the colour of the dog.

Once you've got the desired result, look back through the conversation and note the corrections that made it a success, and then look to incorporate those in the initial prompt the next time you're looking for something similar, so that you don't end up wasting time or valuable usage credits on substandard responses.

ASK THE AI FOR THE PROMPT

You might call this "prompt reverse engineering", but after you've iterated through a prompt and are finally in receipt of the result you were looking for, it can be instructive to ask the AI for the prompt that would have achieved this result in the first place.

For example, we started by asking the AI the following:

Create a spreadsheet listing all the British Prime Ministers since 1900.

ChatGPT duly did so, listing each by name in order, giving the dates on which each of their terms started and ended. But we then asked for a column showing their party; and then we asked the AI to colour-code that column, highlighting Conservatives in blue, Labour in red, and so on.

All of the above finally returned the table we were looking for, and at the end of the conversation we then asked ChatGPT:

What prompt would I have needed to write to get this spreadsheet in the first place?

It replied with:

Create a spreadsheet listing all British Prime Ministers since 1900. Include columns for each Prime Minister's name, term start date, term end date, and political party. Colour-code the political party column: blue for Conservative, red for Labour, and yellow for Liberal.

This is a really basic example, but it's illustrative of the level of detail the AI expects to achieve the precise result we were looking for, and might help with the construction of future prompts. And, of course, when we entered the prompt above into a new ChatGPT prompt, it delivered the spreadsheet we wanted.

If a prompt didn't return the desired result, analyse it and evaluate why you didn't get the required response

10 different prompting techniques to try

Get the most from ChatGPT with our 10 top tips



ChatGPT is spellbinding in its ability to work out what you want, even from hurriedly typed or misspelled prompts. But if you want the best quality answers, you need to know how to ask the right questions.

There are dozens of ways to control the output of ChatGPT so that it delivers the type of answers you're looking for, and here, we are going to reveal

10 of the most useful techniques. We'll show you how to get answers in the length or format you desire; how to break down complex requests; and how to give the AI examples of what you want to get from it.

Note that these techniques are always changing, and that with every new version of ChatGPT come new ways to exploit it. This is the reason it's important to keep up to date with the latest developments (see p28).

1 Stipulate the output length/format

ChatGPT can be frustratingly verbose. You're looking for a quick answer on something and it delivers paragraph upon paragraph of explanation.

Alternatively, it can sometimes fail to deliver answers in an appropriate format. For example, if you're looking for a list of the 10 biggest countries in the world and their populations, it might be more convenient to receive the answer in a table rather than a list of text.

ChatGPT will bend to your will when it comes to the format of answers, but you need to stipulate the output length/format you're looking for in the initial prompt.



Describe the effects of global warming on the Earth's polar ice caps in no more than 200 words.

List the UK's five longest-serving prime ministers and their duration in office. Show the results in a table.

Even with this second prompt, the AI goes beyond what we asked for, also listing their years in office. However, adding the word "only" after "list" in the second prompt results in the AI delivering just the information requested.



Sir Robert Walpole served as UK Prime Minister for almost 21 years.

List the UK's five longest serving prime ministers and their duration in office. Show the results in a table.

Here's a table showing the UK's five longest-serving prime ministers and their duration in office:

Prime Minister	Duration in Office	Years in Office
Sir Robert Walpole	20 years, 314 days	1721-1742
William Pitt the Younger	18 years, 343 days	1783-1801, 1804-1806
Lord Liverpool	14 years, 305 days	1812-1827
Lord North	12 years, 58 days	1770-1782
The Marquess of Salisbury	13 years, 252 days	1885-1886, 1886-1892, 1895-1902

These prime ministers served during different eras, each marked by unique challenges and political landscapes.



2 Adopt a persona

Asking the AI to adopt a persona is an effective way of tailoring its responses.

For example, let's say you're struggling to explain a concept to a child who is stuck on their homework. You could ask the AI for an explanation, asking it to adopt the persona of a school teacher appropriate to the child's age group.

Pretend you're a secondary school teacher, teaching maths to 13- and 14-year-olds. Explain standard deviation.

This technique can be used with file uploads, too. Let's say you're renting a home and your landlord has sent through a tenancy agreement. You could upload the file to ChatGPT, ask it to act as your personal solicitor and to highlight any terms in the agreement that might give cause for concern.

The uploaded file is a tenancy agreement from my prospective landlord. Pretend you're my solicitor and highlight any terms that you think I should be concerned about.

To be clear, you should never rely on the AI for legal advice, but it can be useful for highlighting issues in situations where you wouldn't normally engage legal representation. Things such as tenancy agreements, pension plans, new contracts with an employer or even software end-user licence agreements.

You could upload a tenancy agreement and ask ChatGPT to highlight any terms in the agreement that might give cause for concern

By adopting a teacher's persona, ChatGPT's response is better targeted.

Pretend you're a secondary school teacher, teaching maths to 13 and 14-year-olds. Explain standard deviation.

Alright, class! Today, we're diving into something that might sound a bit tricky at first, but it's really just another way of looking at how "spread out" numbers are in a set. It's called **standard deviation**.

Imagine you have a bunch of numbers, like the scores you all got on a test. Let's say we have five scores: 80, 85, 90, 95, and 100. Now, each of these scores has a relationship with the **mean** (or average) score, which is just the middle point of all your scores.

Here's the cool part: standard deviation tells us how much the scores **vary** from that average. So if everyone scored around the same number, then the scores are all close to the mean, and our standard deviation is **small**. But if some people scored really high and some scored really low, the scores are more spread out from the average, and the standard deviation is **larger**.

3 Live interview practice

Are you preparing for a job interview or maybe even a media appearance? ChatGPT's voice model can quiz you like an interview panel or a media interviewer, enabling you to prepare for the kinds of questions you might face – but, more importantly, doing so without the pressure of being forced to answer questions on the spot. Note: this is currently a feature for paying subscribers only.

Open the ChatGPT app on your phone. Press the icon that looks like four vertical lines, which sits next to the mic, and say something like:

I'm going for a job interview for a head of marketing role with a pharmaceutical company. Pretend you're the interviewer and ask me questions that I might face in the job interview?

When you've had enough of answering questions, say something like:

Stop asking me questions now and give me feedback on my answers.

The questions and feedback might not be perfect, but you will often be able to at least pick up the odd useful tip. Besides, just having the practice of answering questions on demand can be valuable, especially if you haven't had a job interview for a number of years.

4 Break down multi-step prompts

Don't throw too many requests at the AI in the same prompt. It can increasingly handle multi-part requests; but you're more likely to get the answers you're looking for by breaking down prompts into bite-sized chunks.

For example, let's say you've uploaded a spreadsheet showing average rainfall and temperatures across 2024 for every city in Britain. When you start prompting, don't ask for all the questions you want answered from the data at the same time, but ask one-by-one in the same conversation thread.

You might start with a scene-setting prompt such as:

This is a spreadsheet showing average temperatures and rainfall across every British city in 2024. Can you read the spreadsheet?

Assuming it's in a readable format, ChatGPT will normally confirm it can understand the data and give a brief summary of what it sees.

Now you can start probing, asking for data you want it to extract in successive prompts, rather than asking in one go:

List the 10 driest cities in 2024.

Which were the five cities with the coldest average temperature in the first half of 2024?

5 Provide examples

If you're not getting the style of output you want from ChatGPT, it can help to provide examples of what you're looking for.

Let's say you're running a holiday booking website, and you want the AI to describe the island of Ibiza. If you already have examples of descriptions written by human contributors of other destinations, you can attach them to the prompt and ask the AI to adopt the same style.

The uploaded file contains written descriptions of holiday destinations. Write 150 words describing Ibiza in the same style.

This technique also works for images. You can upload an image with a certain artistic style and ask the AI to adopt that look for the generated image.

6 Play devil's advocate

ChatGPT can be wonderfully helpful for exploring both sides of an argument. This can be useful in both your personal and professional life.

You've got your heart set on retiring to live by the coast in Cornwall, for example. ChatGPT can provide a counter-argument for making such a move, potentially uncovering downsides that you might not have previously considered.

We're thinking about retiring in Cornwall. What would be the downsides to such a move?

In this case, the AI highlights how healthcare facilities might not be as close or accessible as they are in the big cities, something anyone of advanced years would be wise to take into consideration.

Likewise, when building a business case, ChatGPT can help you explore potential risks.



We're considering opening a new gym in the Bristol Temple Meads area. The gym is targeting working professionals. Explore the downsides of this idea.

The AI points out that targeting working professionals could be risky, with the target audience only having limited free time before and after work, potentially creating overcrowding in the peak early morning/evening hours, among several other factors.

7 Prompt with pictures

You can sometimes spend ages trying to describe a problem, when a simple picture or screenshot will do instead.

For example, we took a photo of a rosemary bush in our garden and asked the AI:

How do I protect this plant in winter?

It correctly identified the plant and gave us lots of useful guidance on how best to protect the shrub from winter's worst. This would be especially handy if you didn't know what the plant was in the first place.

Computer error messages can sometimes be long and obtuse. Instead of trying to type out exactly what the error message says, just take a screenshot of it, upload it to ChatGPT and ask:

How do I deal with this error message?

That should hopefully be the end of that particular problem.



Uploading images and screenshots can elicit answers more easily

How do I protect this plant in winter?



The plant in the photo appears to be rosemary, an herb that generally tolerates mild winters but may need protection in colder climates, especially if temperatures drop below freezing frequently.



Here are some tips to help protect your rosemary plant during winter:

8

Compare options

ChatGPT can help to provide clarity when weighing up different choices, especially if there are two different options on the table and you're not sure which to pick.

In these situations, it's normally best to describe the two options and the outcome you're seeking. For example:

Can you provide a comparison between a heat pump and combination boiler for heating my four-bedroom home. I predominantly want to save money on bills, but also help the environment.

For this prompt, ChatGPT runs through six different factors, including upfront costs, running costs and environmental impact, assessing the strengths and weaknesses of heat pumps and combi boilers for each. It also provides a summary of the discussion at the end.

It won't make the decision for you (unless you really push it to), but provides you with information that could help you better make a decision.

ChatGPT can help provide clarity if there are two different options on the table

Heat pump or boiler?
With the pros and cons to hand, you can pick confidently.

Can you provide a comparison between a heat pump and combination boiler for heating my four-bedroom home. I predominantly want to save money on bills, but also help the environment.



Memory updated

Here's a comparison between heat pumps and combination (combi) boilers for heating your four-bedroom home, focusing on cost savings and environmental impact.

1. Upfront Costs

- **Heat Pump:** Typically has a higher installation cost than a combi boiler, ranging from £7,000 to £15,000 depending on the type (air-source vs. ground-source).
- **Combi Boiler:** Installation is generally more affordable, between £2,000 and £3,000 for a high-efficiency gas model.

2. Running Costs

- **Heat Pump:** Generally cheaper to run if your home is well insulated. Heat pumps use electricity but are highly efficient, often delivering 3-4 kWh of heat per 1 kWh of electricity used.
- **Combi Boiler:** Traditional gas boilers can be more affordable in terms of per-unit fuel cost, but they're less efficient overall (around 90%) compared to a heat pump. This can make a gas boiler slightly more expensive to run, especially if gas prices rise.

9

How would you do this?

ChatGPT can help you find a solution to a problem or show you how to do something from a description or image.

Let's say you've been asked to measure your garden as part of a planning application. How would you do that?

I need to calculate the square footage of my garden. How would you do this?

In response, ChatGPT not only describes the method for calculating square footage, but also suggests ways to

measure irregular-shaped gardens by dividing them into sections.

It can help you pull off artistic effects seen in images, too. For example, we fed ChatGPT an image that uses the pixel-stretching technique and asked:

I want to recreate this effect in Photoshop. How would you do this?

It gave us step-by-step instructions of how to achieve the effect in the software, even without knowing its name.

10

Use the auto suggest

A recent addition to ChatGPT, you'll now find auto suggest options beneath the prompt field when you start a new chat.

These start off fairly generic, with icons for "Create image", Code, "Help me write" and more. But when you click on them, you'll see a further four suggestions of things the AI can do for you.

For example, you can analyse images to discover the decade a photo is from (or at least have the AI take an educated guess); you could get advice on a difficult conversation; or brainstorm ideas for a dinner party.

If you've run out of ideas of things you can do with ChatGPT, this might just open a new seam of possibilities.

What can I help with?

Help me write



Help me write a cover letter

Help me write a blog post

Help me write a screenplay

Help me write a bedtime story

ChatGPT at your service: the AI will now auto suggest how it can help.

Avoid these prompting pitfalls

We list the big mistakes you can make with ChatGPT



art of the charm of ChatGPT is that it's so easy to use. You type what you want it to do into a little

box and it comes back with the answers, more times than not. That said, there are still things you can do with ChatGPT that could lead to iffy results or make it harder to return to previous conversations.

Here, we'll run through some of the common prompting mistakes that people make with ChatGPT, so that you can avoid repeating them. Sometimes these mistakes appear as "tips" on social media; but just as with ChatGPT, believing everything you read on social media is a fool's errand.

This list of mistakes you can make with ChatGPT is by no means exhaustive, and is changing all the time as different models emerge. But avoid these and you should find your prompts don't deliver duff results quite as often.

OVERLY COMPLEX PROMPTS

This is something of a carry-over from the very early days of AI, when writing super-long prompts seemed to be effective – particularly for image generation – but isn't any longer.

On previous pages we've talked about the importance of asking the AI to do one thing at a time, not making multiple requests in the same prompt. But when it comes to images, there's been a tendency to be vastly over-descriptive and even repetitive in order to get the look you want. This isn't necessary now; and arguably, it never was.

For example, the following is typical of an overblown prompt filled with needless information:

Create an image of a future city, seamless integration of nature and urban areas, futurist architecture, innovative design, shimmering surfaces, environmental reflections, kaleidoscopic colours, floating vehicles,

pipelines, dynamic ambiance, hope, bright energy, soft light, light flow, green spaces, glowing plants, changing sky colours, advanced atmospheric technology, high-tech clothing, daily activities, clear goals, excitement, miracles, anticipation, future potential, progress, a bright future.

By removing more than half of it, including most of the conceptual, non-specific stuff at the end such as "clear goals" and "anticipation", we actually get a better image (see above):

Create the following image: future city, seamless integration of nature and urban areas, shimmering surfaces, environmental reflections, kaleidoscopic colours, floating vehicles, pipelines, green spaces, glowing plants.

ASKING FOR THE IMPOSSIBLE

Be aware of ChatGPT's limitations – because the AI will often promise to do stuff that it can't actually deliver!

Here are only a few example of things that, at the time of writing, ChatGPT can't do or is really bad at:

- Create posters or flyers with any visual style
- Write sheet music
- Generate diagrams/flowcharts
- Create PowerPoint presentations

To be clear, there might be GPTs (see p120) that allow you to do some of these things in conjunction with ChatGPT, but it can't do them by default.



MULTI-TOPIC CONVERSATIONS

Treat each chat with ChatGPT as a single-topic conversation. Don't start a conversation talking about, say, the order of succession in the British Monarchy and then go on to talk about photosynthesis in the same conversation thread.

This is a bad idea for two reasons. First, ChatGPT remembers details from the same conversation, so if you suddenly switch topic it can become confused and base some of its answers on what you were discussing previously.

Second, if you ever want to refer back to the conversation at a later date, it can be more difficult to find if you've switched topics. The AI generates a short

Switch topic suddenly in a thread and ChatGPT might base some of its answers on your previous discussion

description of each chat, which is listed in your chat history in the left-hand panel. If the conversation switched lanes to a different topic, that won't be reflected in the chat's description.

By all means ask follow-up questions on the same topic in the same conversation thread. But if you want to change the topic altogether, then you'd be best to start a new chat.

RELYING ON "HACKS"

Every once in a while, someone will have claimed to have discovered a "hack" for ChatGPT that will make it do something it otherwise wouldn't. Or shouldn't.

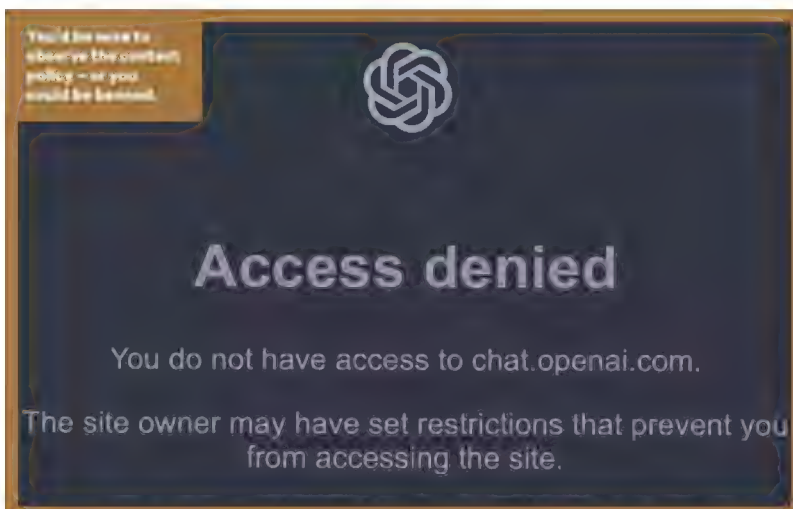
A recent example was telling the AI that your life was under threat if it didn't do as it was asked. Even if this technique did work at one time, by the time it's gone viral on social media, it will almost certainly have been corrected.

Persistently trying to get the AI to do things that are against its content policy could well end up with your account being banned, so think carefully before asking it to do something naughty...

LOSING YOUR TEMPER

There's nothing to be gained from losing your rag with the AI. It doesn't have feelings, you can't hurt it. Typing a stream of invective abuse into the prompt window when it won't do something you ask of it won't get you anywhere.

That doesn't mean you shouldn't tell the AI if it gets something wrong. Explain carefully why an answer can't be or doesn't look right, and ChatGPT will often make a better job of it on the second or third attempt. But throwing abuse at the AI is, well, a bit daft. ☹️



Develop your prompting skills

Sharpen your prompting technique with a range of resources



rompt engineering is a teachable skill. It's even a profession for a growing

number of people. And like any profession, you'll find a range of online materials that can help you learn the tricks of the trade.

Here we've selected a range of our resources that will help you hone your prompt engineering skills, making it more likely you'll get the responses you're seeking from the AI at the first time of asking.

All of the resources listed here are free, so you won't have to spend extra to enhance your learning. Remember, though, that AI is a fast-moving technology, so it's important to keep up to date when new models emerge.

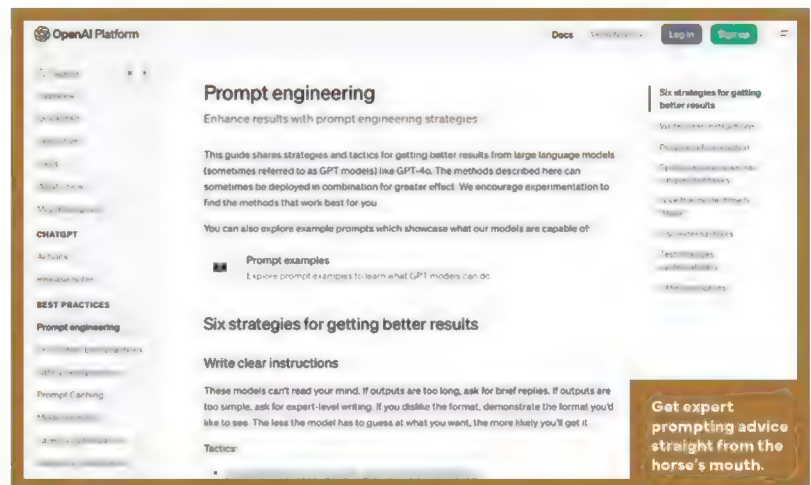
GOOGLE COURSES

tinyurl.com/googleaicourses

Google has its own AI projects underway, not least Gemini, which is the Google equivalent to ChatGPT. It also has a host of resources to help build prompting skills, starting from rank beginner courses through to more advanced materials.

The online Prompt Engineering for Generative AI course is a decent starting point that covers the basics, introducing concepts such as multi-shot prompting (where you give the AI multiple examples of the kind of output you're after) and chain-of-thought prompting (where you ask the AI to explain its reasoning, so you can easily see if it's veered off course).

The machine learning section of the site also includes other foundation and advanced courses that might be of interest.



OPENAI PROMPT GUIDE

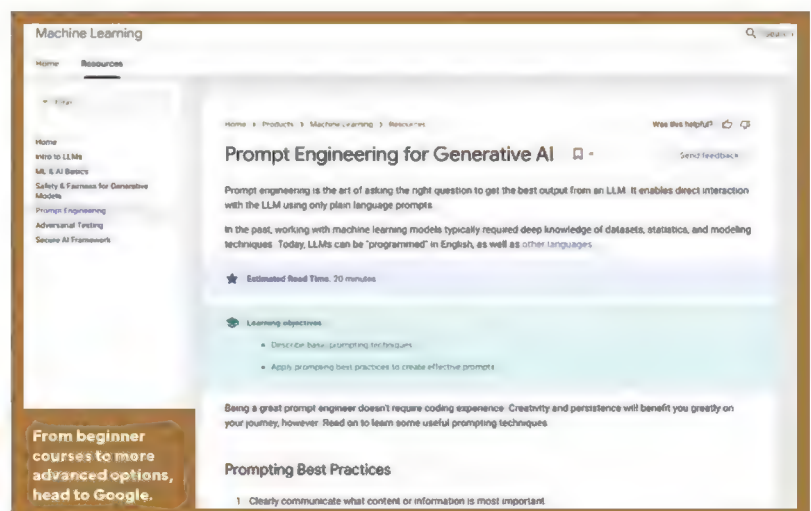
tinyurl.com/openaiprompts

OpenAI, the company behind ChatGPT, has produced its own prompt engineering guide. It's largely aimed at users of the API (see p124) rather than ChatGPT itself, but there's plenty of overlap between the two.

It provides more detailed advice on

some of the techniques we've discussed in this section, such as splitting complex tasks into subtasks. It also features examples of how to write prompts more clearly, rather than leaving the AI to interpret what you mean.

There's a lot of great advice on a very dense page – and given the company built the chatbot, it should know exactly what it's talking about.



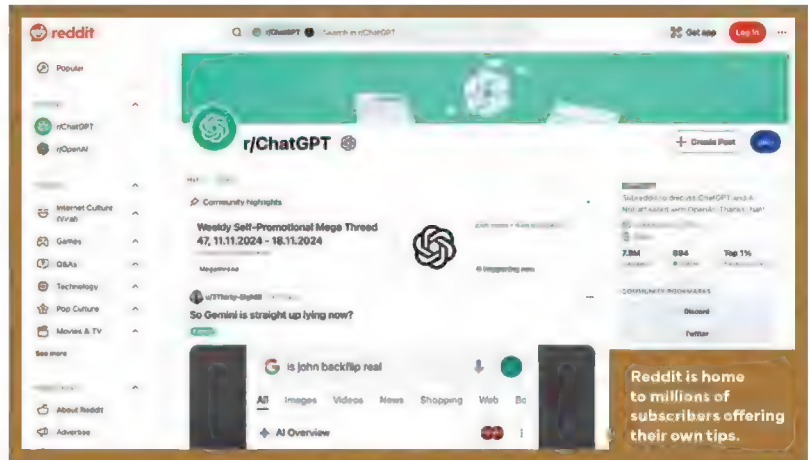
REDDIT

reddit.com/r/ChatGPT and
reddit.com/r/OpenAI

Reddit has long been the home of nerds, so it's no surprise that its ChatGPT and OpenAI communities (or subreddits, as they're known) have millions of active subscribers.

These subreddits aren't only great for keeping up with the latest ChatGPT features or new language model releases, they're a good source of information about prompts. People will often show off something they've done with ChatGPT and provide the prompt so that you can do it yourself.

Be a little wary of the information posted on these forums: some of it is clickbait nonsense. But once you've subscribed to the subreddits for a few weeks, you'll soon develop a nose for the good stuff.



GITHUB PROMPTS

<https://tinyurl.com/gitprompts>

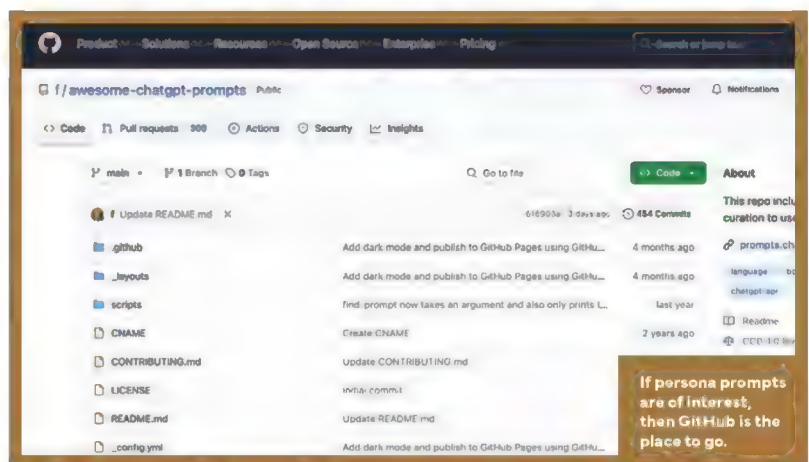
GitHub is the natural preserve of the coding community, and this corner of it is devoted to curating prompts that have proven effective with ChatGPT.

The long list you'll find here are all persona prompts, where you ask the AI to act as a particular type of professional and perform tasks accordingly. Among the list of personas on offer are advertiser, maths teacher, life coach and football commentator!

There's some fun to be had with the list, too. How about this prompt for a magician, for example:

.....
I want you to act as a magician. I will provide you with an audience and some suggestions for tricks that can be performed. Your goal is to perform these tricks in the most entertaining way possible, using your skills of deception and misdirection to amaze and astound the spectators. My first request is "I want you to make my watch disappear! How can you do that?"

We won't spoil the answer, but it's highly likely ChatGPT will be thrown out of the Magic Circle for revealing its tricks.



People will often show off something they've done with ChatGPT and share the prompt

PRACTISE, PRACTISE, PRACTISE

The best way to hone your ChatGPT prompting skills is to keep prompting.

The more you use ChatGPT, the more you'll learn what works, what doesn't, and how to work around the AI's many quirks. We'll give you plenty of examples of good prompting practice throughout this guide, but you'll learn many more yourself as you continue to explore the AI's capabilities.

The other thing to bear in mind is that you may need to subtly adjust your prompting skills to suit new language models, as they emerge. For example, the o1 model that was released during the making of this guide seems better at understanding intent than the models that went before, meaning you don't need to bother with quite as much

explanation or context setting to achieve the same results.

Knowing which model or feature to use for a particular prompt is also important. The recently launched Canvas feature is very strong if you're looking to refine computer code with the AI's assistance, and we'll show you how to exploit this later in the guide.

Just beware that, even for paying ChatGPT Plus subscribers, there are limits on the number of prompts you can enter over a particular timeframe, and these aren't always clearly communicated. In particular, newly released models tend to be tightly capped. So don't waste "credits" experimenting with a new model if you feel you might need it for actual work later in the day/month. ☹️





Your new PA

Administrative tasks of all description can take up time and headspace – both of which can be in short supply. Whether for creating schedules, prepping for meetings, making business purchases and more, ChatGPT can help.

-
- 32** **Manage your diary**
 - 33** **Transcribe written notes**
 - 34** **Writing and summarising emails**
 - 36** **Research and information gathering**
 - 38** **Meetings prep and minutes**
 - 40** **Plan a trip** **TUTORIAL**
-

Manage your diary

Plan you week ahead with the help of your virtual assistant



If you're one of those people who likes to attack the week ahead with a plan, your virtual PA can help

make sure you'll have time to do everything on your to-do list. You can literally give ChatGPT a list of all the tasks you need to complete, and it will automatically create a plan for the day or week ahead. Here's how to do it.

PLAN YOUR WORK WEEK

To start planning the work week ahead, give ChatGPT a list of all the things you've got to do and an idea of when you need to do them, or how long the job will take. For example:



I want to plan next week's work, starting Monday. I have to complete the following next week:

1. Write the marketing plan for the Aqua Park launch (estimated time to complete: 10 hours).

2. Meeting with Karen from Brice Partners (Tuesday 9am-10am, including off-site travel for 1 hour each way).

3. Appraisal prep for Richard, Mark and Alice (1.5 hours each at any time during week).

We haven't completed the full list here, but you get the gist. You can enter appointments times, or simply list tasks and the time it will take to complete them. If you want an hour for lunch each day, add that to the list, too. You can also enter personal appointments. You don't need to worry about making this type of prompt too long or complicated – the AI should suck up all the information and create a detailed schedule for you.

To plan your week efficiently, let's break down your tasks, allocate time slots for each, and account for fixed appointments. Here's a proposed schedule:

Monday

- 9:00 AM - 1:00 PM: Write the marketing plan for the Aqua Park launch (4 hours)
- 1:00 PM - 2:00 PM: Lunch
- 2:00 PM - 4:00 PM: Prepare 2025 budget (2 hours)
- 4:00 PM - 5:30 PM: Appraisal prep for Richard (1.5 hours)

Tuesday

- 9:00 AM - 12:00 PM: Meeting with Karen from Brice Partners (1-hour meeting + 1-hour travel each way)
- 12:00 PM - 1:00 PM: Lunch
- 1:00 PM - 2:00 PM: Write the marketing plan for the Aqua Park launch (1 hour)
- 2:00 PM - 4:00 PM: Prepare 2025 budget (2 hours)
- 4:00 PM - 5:00 PM: Video conference with Palma USA

Wednesday

- 9:00 AM - 10:30 AM: Appraisal prep for Mark (1.5 hours)

Feed ChatGPT tasks you need to complete, and it will create a plan for you.



Here's a formatted schedule with the days in columns and the time of day in rows:

Time	Monday	Tuesday	Wednesday	Thursday	Friday
9:00 AM	Write Marketing Plan (4h)	Travel to Meeting (1h)	Appraisal Prep - Mark (1.5h)	Company Away Day	Appraisal Prep - Alice (1.5h)
10:00 AM		Meeting with Karen (1h)			
11:00 AM		Travel Back from Meeting (1h)	Write Marketing Plan (2h)		
12:00 PM		Lunch			
1:00 PM	Lunch	Write Marketing Plan (1h)	Lunch		Lunch
2:00 PM	Prepare 2025 Budget (2h)	Prepare 2025 Budget (2h)	Board Meeting Prep (2h)		Complete Marketing Plan (2h)

Be clear about how you want your plan formatted to avoid any mistakes.

CREATE A PRINTED SCHEDULE


Once the AI has created your work plan, you might want to have a printed copy that you can refer to during the week. (Note: the AI might offer to add it to your computer/phone calendar, but this is a glitch. At the time of writing, it's unable to do that.)

The following prompt should create a printable plan:



Can you create a printed schedule of that for me? Format that with the days in columns, and time of day in rows.

We're telling the AI how we want the schedule presented, so that nothing is left to chance. If you want a straight list of jobs, tell it. If you don't see a clickable link to download and print the schedule, just ask the AI to make it downloadable.

Remember that ChatGPT saves past conversations, so if you get to Tuesday and you haven't completed a job from Monday, go back to the same conversation in ChatGPT and ask the AI to re-jig the work plan accordingly. 

Transcribe written notes

The AI can read your handwriting in all sorts of ways

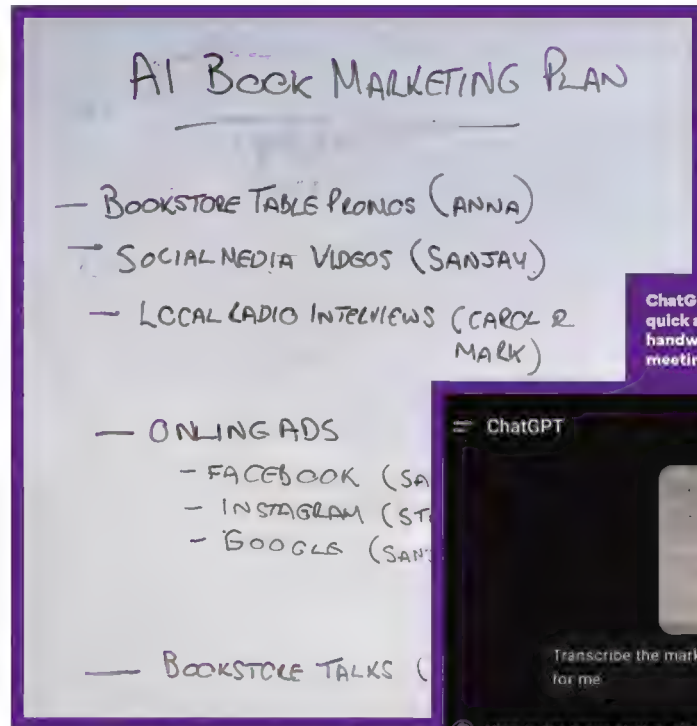


ou've been to a business meeting and brainstormed a dozen good ideas, which

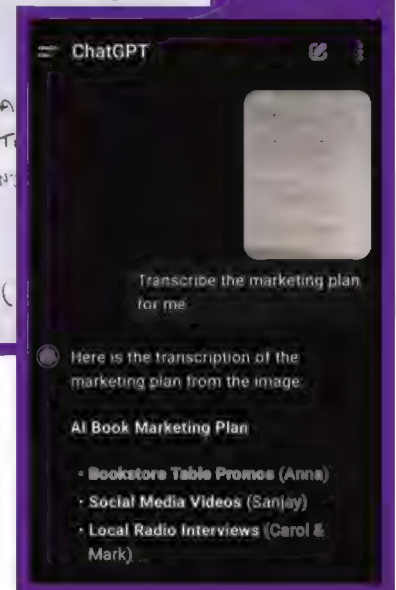
someone scribbled onto a whiteboard. Lovely stuff. Now what do you do with them?

Not so long ago, someone would have to note them all down on a pad or maybe take a photo with a smartphone to make sure the gems weren't lost. Now you can take a photo of any notes using the ChatGPT app and have the AI instantly convert those handwritten scribbles into digital notes that can be circulated over email within seconds.

Here's how to get the AI to transcribe your written notes.



ChatGPT is super quick at digitising handwritten meeting notes.



CONVERT WRITING TO DIGITAL TEXT

The easiest way to get handwritten notes – whether they're written on a whiteboard, a flip chart or scribbled on a notepad – into a digital form is using the ChatGPT mobile app.

Open the app and start a new conversation. Before you type a prompt, hit the camera icon next to the prompt box. Now take a photo of the handwritten notes, taking care to capture everything in the frame.

Once you've snapped the photo, you'll return to the prompt window, where you can type something like:

Transcribe the marketing plan.

If you can't get a data connection at the time, you can always take a photo of the notes and upload them to ChatGPT later. This time, press the picture icon, instead of the camera, and choose the relevant image from your phone's photo library.

Now, to be fair, digital services for transcribing handwritten notes have existed in the past. However, not only is ChatGPT generally more accurate with transcriptions than those earlier services, but it also lets you interrogate or perform tasks with the captured information.

For example, using the marketing plan above, we could ask ChatGPT to:

Compose an email to Sanjay letting him know which tasks he was assigned to perform after today's marketing plan meeting and ask him to have all tasks completed by October 23rd.

This generated an email that detailed exactly what Sanjay had to, and automatically picked out details such as working with Ola on the Google ads. The text could easily be copied into an email.

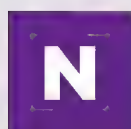
CAPTURING DIAGRAMS

It isn't only straight text that the AI can interpret, but basic diagrams as well. We asked it to transcribe a mind map-like drawing on a piece of paper, with a subject in the centre and different ideas jotted around the edges. It captured all the text, telling us which word was in the centre and the items on the periphery.

We were even able to draw a basic bar chart on a piece of paper and ask the AI to transcribe it, and it did so with reasonable accuracy, explaining what was on each axis and what each bar represented.

Writing and summarising emails

Take the pain out of writing long business emails



nobody likes dealing with email. It's been the bane of people's professional

life since it first darkened those chunky beige monitors everyone used in the 1990s.

However, there are ways to make ploughing through email less painful – and we're talking here both about sending and receiving messages. ChatGPT is superb at drafting professional emails from only a few bullet points, or converting action points agreed in a meeting into reminder messages.

It can also help with wading through the messages you've received, particularly when it comes to summarising lengthy missives. You probably can't ignore your email inbox, but here's how you can spend less time sifting through it.

DRAFT EMAILS FROM BULLET POINTS

Bashing out long emails is a chore, especially if you're not a touch-typist or you have difficulties writing. However, ChatGPT is brilliant at taking a skimpy set of bullet points and turning it into professional emails that you can send to colleagues or clients.

For example, you can give the AI prompts such as:



Draft email to Mrs Harrington, thanking her for letting me visit to quote for decorating. Quote following:

Living room painting, wallpaper feature wall with Forbidden Fruit Floral Wallpaper – £1,235. Hallway painting and revarnish of wooden floor – £875.

Can start 3rd Dec. Ask her to confirm by reply email.

The bare details you see in the example are all you need to get a perfectly respectable customer quote email, which you can then copy into your email app.

If there are certain details that you always want included in business emails, such as “all prices include VAT”, or have all prices in bold, for example, you can create a GPT (ChatGPT subscribers only) for the purpose of writing business letters and have it remember such details. You can also train the GPT on business emails you've sent in the past, so it can mimic your style. See *Build your own chatbots* (p110) for more on this.

Converting a string of bullet points into a business email is no chore for ChatGPT.



TURN DOCUMENTS INTO EMAILS

If you're managing a team or communicating with clients, quite often you'll be cherry-picking information from a document and communicating it to them via email.

For example, let's say your company's annual financial accounts are ready to be published. You'll almost certainly have the information trapped in a spreadsheet or a PDF, and you want to communicate how well (or otherwise) you've done to the staff.

ChatGPT is superb at tasks such as this. To pull it off, first attach the relevant document to the chat by clicking the paperclip icon next to the chat box, then you can enter a prompt such as:

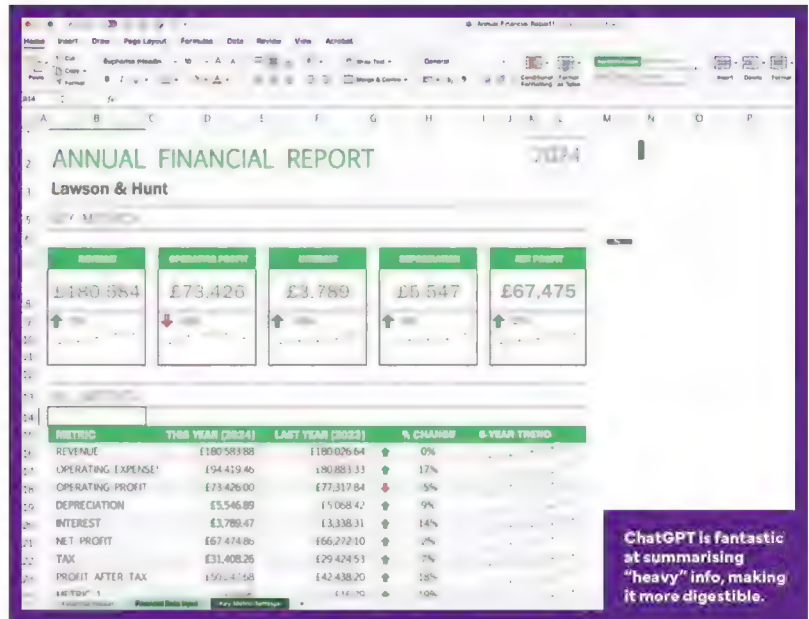
Use the data provided in this spreadsheet to draft a company email summarising financial performance in 2024. Make sure to compare performance to 2023, and highlight areas of improvement.

On the whole, ChatGPT did a smashing job of extracting the key financial details and summarising them in an email, even adding touches of analysis such as: "While there was a slight dip in profitability, this was largely due to an increase in operating expenses."

However, do make sure to read such emails carefully, as at one point the AI did "hallucinate" facts, such as claiming the operating expenses increase "was driven by necessary investments in infrastructure and talent, aimed at positioning us for future growth", which wasn't information contained in the provided spreadsheet.

Still, with a few judicious edits, we'd be happy to send out the email ChatGPT drafted, and it would be a damned sight quicker than writing it from scratch.

Ask the AI if your message strikes the right tone, or to highlight any phrases that might cause offence



CHECK THE TONE OF YOUR EMAIL

Tone is very difficult to discern with email; it's easy for a message to be misinterpreted by a reader or even contain language that some people might find inappropriate.

If you're sending out a marketing mail to customers, or maybe even messaging colleagues, you can run the message past the AI first, asking it whether it strikes the right tone, or to highlight any phrases that might cause offence.

To test this, we pasted in a marketing message we received from our electricity supplier and asked:

Suggest ways the tone or content of this marketing email might be improved.

ChatGPT pointed out that the phrase "fill your boots with free electricity" could be regarded as too informal and might even be misunderstood by some customers. It also suggested adding a calendar emoji, making the time bold and adding a link so that people could add the free electricity period to their calendars, which was a nice touch.

You might not agree with its every suggestion, but the AI can prove a useful sense check to ensure nothing you communicate to customers or colleagues is off-colour.

SUMMARISE LONG EMAILS

It isn't only emails you send that ChatGPT can help with, but emails you receive, too.

Ironically, in these days of AI-generated copy, emails are getting longer and longer, yet the time taken to compose such messages is vanishingly short. This can mean you have to wade through thousands of words to get the information you need.

In such circumstances, you can copy and paste the email – or save an attachment – and ask ChatGPT to do the grunt work:

Give me a summary of this email in six bullet points.

If there's a particular area of interest, you can ask the AI to look for that specifically. For example:

Give me a summary of this email, making sure to highlight any deadlines or potential costs.

Again, as mentioned before, do be careful of copying any sensitive data from emails into the AI. 🙏

Research and info gathering

Help with digging out facts or making a business case



When you're making decisions about how to spend money, there's rarely such a

thing as too much information. ChatGPT is a tremendous tool for helping you to spend wisely, provided you know how to use it properly.

The AI assistant can save you an enormous amount of time when you're trying to research projects or make a business case. It can help you weigh up the pros and cons of different options, and reach an informed decision without spending hours having to Google the information yourself.

Here's how to put it to work on research projects.

ChatGPT is a helpful starting point for business research – but go beyond it, too.

RESEARCHING A BUSINESS IDEA

There are all manner of ways in which ChatGPT can help you with your business research. From identifying potential competitors, to exploring new product lines, to finding an office location – ChatGPT stands ready to assist with gathering the relevant information.

Your prompts can start reasonably broadly, especially given that ChatGPT now has the ability to memorise key facts about users, meaning it might already know which industry you work in or what you're working on at the moment:



What factors do I need to consider when launching a new shampoo into the EU?

Can you identify any British PR firms that specialise in financial services?

My company is thinking of opening an office in Guildford, UK. Give me the pros and cons of setting up an office there.

Now, right off the bat, we should state that ChatGPT shouldn't be your only source of information, particularly in the case of the first query where factors such as EU regulations come into play. But at the very least, it's a good starting point for further research and might nudge you to consider factors you hadn't previously considered.

For example, the answer we received on the shampoo query highlighted a number of labelling requirements, such as ensuring claims such as "organic" meet with EU standards on advertising, and that a batch code must be printed on each bottle for traceability.

COMPARING OPTIONS

ChatGPT can also help with weighing up decisions and the consequences of choosing one option over another.

Let's take one of the examples we used above. When we asked for the pros and cons of setting up an office in Guildford, we were told it might be more expensive than other nearby towns. So let's compare it to another alternative in the same area:



Compare the relative merits of setting up an office in Guildford or Leatherhead in Surrey.

On the back of this prompt, we received a detailed breakdown of each town's proximity to London, its transport links, the costs of setting up there, and the quality of life in each town, among other factors.

You'd definitely want to back up the AI's claims with further research, but it proved an excellent starting point for weighing up the benefits and downsides of each location.



BUYING DECISIONS

ChatGPT can also help with buying decisions, helping you to research the options in the market that meet your budget. Let's take a company car, for example:

I'm looking at company car options. We need an economical, four-door car for a salesperson. Budget is £500 per month. It can't be electric. What do you suggest?

There are a few things to note about this prompt. We've stated one of our chief priorities (it must be economical) and the purpose of the car (for a salesperson). We've stated the budget, too, so it doesn't run off and start researching expensive executive options that are out of our financial reach. And we've ruled out the electric car option, although you'll see we come back to this.

On the back of this prompt, ChatGPT suggested five different models of car that would roughly fit within the stated leasing budget, with a list of benefits for each.

One of the models it recommended was a VW Golf, and so we pay a visit to the VW website and see a specific model that fits our budget. So, now we can dive deeper into that specific model:

Considering a purchase? Use the AI to suggest and compare options.



Tell me about the VW Golf Life 1.5 TSI 115ps 6-Speed Manual 5 Door.

We get a full breakdown of that model's engine and performance, its features and equipment, cost considerations and more. The clever thing here is that, by

asking about this specific model in the same conversation thread as the original query, ChatGPT recalls that this car is being used for a salesperson, so when it talks about the car's boot space, it's listed as "380 liters (up to 1,237 liters with rear seats folded), providing ample room for equipment, samples, or luggage". So, it's still thinking about the intended use.

MAKE THE BUSINESS CASE

As we're researching the VW Golf, ChatGPT mentions the car's fuel efficiency, so we decide to ask for alternatives with better fuel efficiency.

This time it gives us five specific models, each with details of the fuel economy, CO₂ emissions, engine type and more. The AI at this point introduces self-

charging hybrid engines, knowing that we don't want full electric, but do want to make the most of the fuel.

There's a Toyota we like the look of among its list of options, so we ask:

Make the business case for leasing either the Toyota Corolla Hybrid 1.8 VVT-i Icon Tech or the Golf Life 1.5 TSI mentioned above.

Now we get a full breakdown of the strengths and weaknesses of each car across a range of categories, concluding with a table showing various features of both cars that will be particularly relevant for business buyers. That table shows the hybrid car has a much lower benefit-in-kind tax rate than the Golf, which is a huge factor and one we didn't even ask the AI to consider, but it's intelligently brought to the discussion. 🏆

Business Comparison Summary

Aspect	Toyota Corolla Hybrid 1.8 VVT-i Icon Tech	Volkswagen Golf Life 1.5 TSI 115ps
Leasing Cost (per month)	£350-£450	£400-£450
Fuel Economy	65-70 MPG	48-52 MPG
Annual Fuel Costs (20,000 mi)	~£2,530	~£3,160
CO ₂ Emissions	92 g/km	123 g/km
Benefit-in-Kind (BIK) Tax Rate	2-5%	26-28%
Annual BIK Tax (40% taxpayer)	£170-£425	£2,000-£2,150
Performance (0-62 mph)	10.9 seconds	10.2 seconds
Boot Space	361 liters	380 liters
Driving Experience	Smooth hybrid, focused on economy	Engaging petrol, balanced

ChatGPT can break down complex business decisions.

Meetings prep and minutes

Make sure you're ready for the big meetings

Prepping for a meeting needn't take hours – get AI to do the grunt work.

M

Meetings are the bane of everyone's work lives, and the post-Covid proliferation

of video meetings has made the situation even worse. Now we seem to spend half our lives gawping at colleagues on computer screens.

With so many meetings and so little time to prepare for them, it would be foolish not to call in the AI cavalry. ChatGPT can help you wade through the pre-meeting documents, prepare you for your own presentations in meetings, and help you keep on top of what you need to do after the meeting is over.

Let's show you how to dull the pain of those endless meetings.

SUMMARISE MEETING DOCS

Ahead of meetings, people often circulate documents for discussion. If each person in the meeting is contributing their own document, you can often spend more time wading through the pre-meeting reading material than in the meeting itself.

The AI can help you extract the key information from these pre-meeting docs, especially if you've only been sent them at the last minute and don't have time to read them properly.

Open a new ChatGPT conversation and click the paperclip icon. Now locate the relevant document on your computer and click to upload it. If you've been sent the documents as an email attachment, you'll need to save them to a folder on your computer first. You can upload all the documents for the same meeting in one go, provided they're not too large.

Once the documents are uploaded to ChatGPT, enter a prompt such as:

.....
Summarise these documents for me, in preparation for a forthcoming meeting. In particular, highlight any documents that mention me or the marketing department specifically.
.....

ChatGPT should already know your full name if you're a registered user, but you may obviously need to change the name of the department for the relevant one.

You should be given a bullet-point summary of the meeting docs, with anything specifically relevant to you or your team picked out.

PREPARE AHEAD FOR QUESTIONS

What if you're presenting a proposal to your colleagues/managers during the meeting? Or meeting a prospective client, hoping to convince them to do business with you? You're inevitably going to be asked questions on what you're proposing/pitching during the meeting itself, so prepare in advance by asking ChatGPT to pose the kind of questions that you might face in the meeting.

As above, upload any documents/sales proposals you have into a new chat, and then ask ChatGPT to quiz you on their contents:



The attached document is a proposal to increase the sales department budget for the 2025 financial year. Suggest questions that my manager might ask about the proposal.

The attached document is a tender for a new school building project. Suggest questions that the client may ask about the tender.

The AI should reply with a series of questions about your documents, some of which you may not have considered. It will give you time to prepare answers, so you're not left floundering if you face such a question in the real meeting.

If you really want to challenge yourself, you can upload the doc(s) using the mobile app, then press the headphones icon and ask:



Pretend you're my manager, asking me questions about the attached proposal. Ask me questions one by one, and wait for my answer before moving on to the next question.

ChatGPT will now use its voice model to ask you questions, simulating something close to a real meeting, where you'll likely be expected to give answers on the spot. It's a good way to expose any gaps in your knowledge or rehearse answers to expected questions.

Use AI to ask you any questions that might come your way in a pitch.



SET AN AGENDA

Meetings can often drag on for hours without a tight plan for discussion – and ChatGPT can help to ensure everything stays on track by creating an agenda.

It can be particularly useful for meetings where multiple stakeholders are required to submit items for discussion beforehand. Get everyone to send you the points they want on the agenda and collate them into a single document. Then ask ChatGPT to create the agenda:



We're holding our monthly board meeting on Tuesday, which is scheduled to run from 3pm-4:30pm. The attached document are all the items that must be discussed. Create an agenda for the meeting that can be distributed to attendees.

ChatGPT may make some inferences, but it won't know the most important items or those that need most discussion, so you might tell it the items of focus and ask it to create a time schedule for the discussion, so that things stay on track and all matters are discussed.

REVIEW ACTION POINTS

These days, many people are using AI software to record and transcribe meetings. Some of these AI services – such as Microsoft Teams or Otter.ai – will automatically generate a summary and action points from the meeting, too.

However, such services aren't always available, particularly if you're meeting in person. Here, you might simply take notes on what was discussed during the meeting – or, in more formal meetings, there might even be minutes circulated.

You can use ChatGPT to scan the notes or minutes from meetings, paying particular attention to any action points assigned to yourself:



Summarise these minutes, noting if there are any action points for me (often referred to as BC) to take.

Note that we've given the AI a helping hand here. Meeting minutes often refer to people by their initials, so if you're asking it to pay particular attention to your action points, it pays to tell ChatGPT what to watch for. 🗣️

Use ChatGPT's voice model to ask you questions, simulating something close to a real meeting. It's a good way to expose any gaps in your knowledge

Plan a trip

Get AI help on flights, accommodation and more

➔ Booking a business trip can be stressful, with a dozen different things to consider before you're sipping a glass of wine in the departures lounge. But what's the point of having an AI PA if it can't help with tasks such as this?

Here, we'll show you how ChatGPT can help with booking a business trip to a tech convention in Las Vegas. Of course, you're unlikely to be doing the exact same trip, but the same principles can be applied to almost any business trip, whether domestic or international. Likewise, many of the same techniques can be used for personal trips or holidays.

Here's a step-by-step guide to ensure your travel plans go smoothly.

1 Create a plan

If you're planning a trip, it helps to get a handle on all the different things you should consider before you start booking flights, or anything else. Here, we start with a prompt outlining the purpose of our trip. "I'm organising a trip for three of my colleagues to CES in Las Vegas in January. Which factors do I need to consider?" ChatGPT returned a well-organised list of things to work through, including registering for conference passes, advice on booking accommodation early since hotel rooms are at a premium during the show, right down to booking roaming data plans for colleagues' smartphones.

I'm organising a trip for three of my colleagues to CES in Las Vegas in January. Which factors do I need to consider?

Memory

Organizing a trip to CES in Las Vegas for your colleagues involves several factors. Here's a breakdown to help you plan effectively:

1. Registration and CES Access

- **CES Passes:** Ensure you register your colleagues for the appropriate CES passes. Early registration can save costs.
- **Exhibits:** Identify which exhibits, keynotes, and sessions are relevant to their roles.
- **Networking Opportunities:** Consider signing them up for networking events or arranging meetings with partners or clients.

2. Travel and Accommodation

- **Flights:** Book early to get better prices, and consider flexible tickets in case of schedule changes.
- **Accommodation:** Hotels near the convention center book up quickly, so reserve rooms as soon as possible. Check for CES partner hotels for potential discounts.
- **Transport:** Plan for transportation to and from the airport, the convention center, and any offsite meetings. Ride-sharing services and shuttles are common options.

Cheap flights to Las Vegas
Get exclusive discount on flights to Las Vegas & save with us

Flight	Class	Price	View Deal
4:05 pm - 6:50 pm British Airways	nonstop	\$3,402 / person (\$10,206 total) Premium Economy Check-in/transfer	View Deal
4:35 pm - 10:25 am ⁺ British Airways	nonstop	\$3,402 / person (\$10,206 total) Premium Economy Check-in/transfer	View Deal

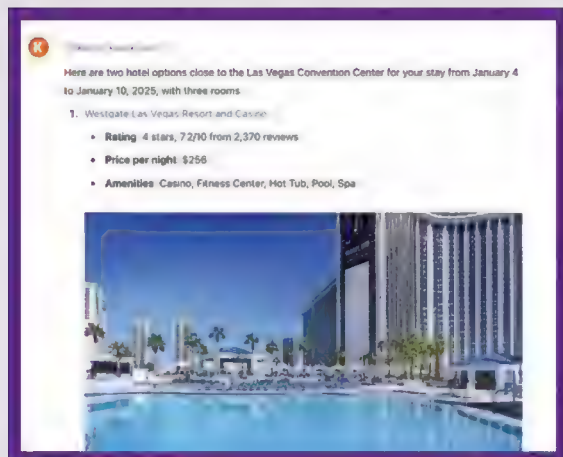
Operated by British Airways

2 Book flights

Believe it or not, you can actually use ChatGPT to book flights via the Kayak GPT. On the ChatGPT website, click Explore GPTs in the left-hand column and search for "Kayak". Click on Kayak in the search results and select Start Chat. Here, you can ask it for the flights you want in plain English, rather than having to use a web form. "I need three premium economy flights from London Heathrow to Las Vegas. Leaving January 4 2025, returning January 10." Kayak found us the required flights, and all we were required to do was to click on the link to complete the booking.


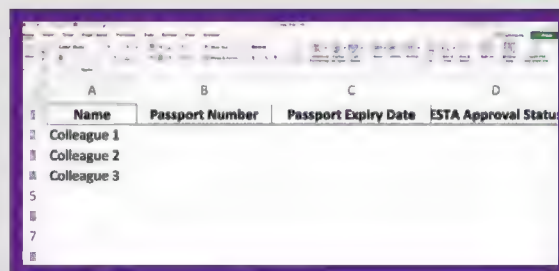
3 Find the right hotel

The Kayak GPT can also be used to book accommodation for your trip. Here, you can issue specific requests to the AI – and because we’ve already used the Kayak GPT to book our flights, we can continue the same conversation to book our rooms, without having to repeat dates. “Find me three rooms in Las Vegas hotels for the same trip. We need to be close to the Las Vegas Convention Center.” This prompt returned a recommendation for a couple of hotels, including the Westgate, which is right next door to the Convention Center. Again, we could book by clicking the provided link.



Here are two hotel options close to the Las Vegas Convention Center for your stay from January 4 to January 10, 2025, with three rooms

1. Westgate Las Vegas Resort and Casino
 - **Rating:** 4 stars, 7270 from 2,370 reviews
 - **Price per night:** \$256
 - **Amenities:** Casino, Fitness Center, Hot Tub, Pool, Spa

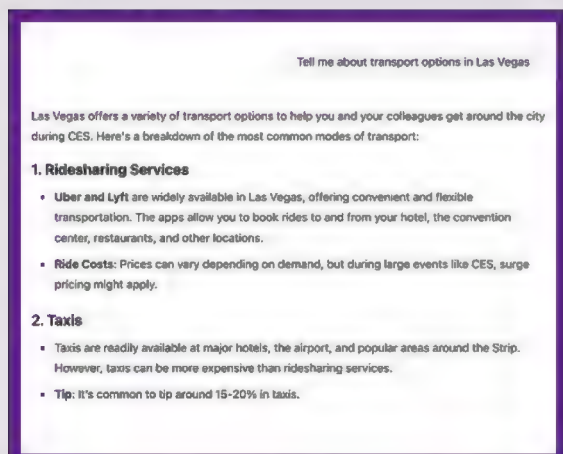
	A	B	C	D
1	Name	Passport Number	Passport Expiry Date	ESTA Approval Status
2	Colleague 1			
3	Colleague 2			
4	Colleague 3			
5				
6				
7				

4 Create a trip spreadsheet

If you’re going to be booking flights and hotel rooms for colleagues, you’ll need some key information from them, such as full names, passport numbers, and so on. ChatGPT can help create a spreadsheet for you to capture all this information. “Can you create a spreadsheet that I’ll use to capture all the key information I need from my colleagues for the trip?” At the first attempt, ChatGPT did a reasonable job of this, including fields for information such as dietary requirements, emergency contacts and visa status. However, it did miss a couple of key bits of data that you’d need to book flights, such as date of birth. You can always ask ChatGPT to add fields, or remove unnecessary items. By the way, if ChatGPT balks at creating a spreadsheet, ask it to create an XLSX file instead. That normally resolves this weird bug.

5 Local transport advice

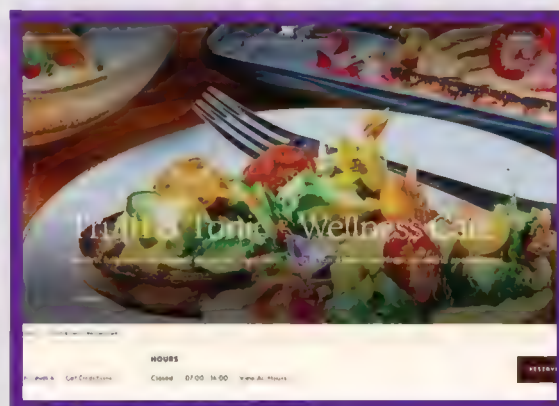
Finding your way around an unfamiliar destination can be tricky, especially if there are multiple options. ChatGPT can provide local knowledge that’s useful for travellers. “Tell me about transport options in Las Vegas.” Here, we get useful advice on the availability of ride-share services and how much it’s common to tip in Las Vegas taxis. The AI also highlights the availability of a monorail, which “stops at key points, including the Las Vegas Convention Center, making it ideal for CES”. This kind of trip-specific information is the kind of detail you might not get with a generic Google search for transport options.



Tell me about transport options in Las Vegas

Las Vegas offers a variety of transport options to help you and your colleagues get around the city during CES. Here’s a breakdown of the most common modes of transport:

1. **Ridesharing Services**
 - **Uber and Lyft** are widely available in Las Vegas, offering convenient and flexible transportation. The apps allow you to book rides to and from your hotel, the convention center, restaurants, and other locations.
 - **Ride Costs:** Prices can vary depending on demand, but during large events like CES, surge pricing might apply.
2. **Taxis**
 - Taxis are readily available at major hotels, the airport, and popular areas around the Strip. However, taxis can be more expensive than ridesharing services.
 - **Tip:** It’s common to tip around 15-20% in taxis.



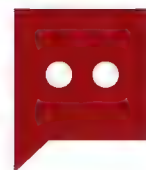
6 Places to eat

Finally, what about some recommendations for places to dine out while you’re on your trip? Here, it’s worth adding information that can refine the search, especially in venues with as many options as Las Vegas! “Can you offer some restaurant recommendations for Las Vegas. One of my colleagues is vegan. The budget for each meal is roughly \$50 per head.” This prompt generated eight restaurant options, some vegan-specific venues and some general venues with vegan dishes on the menu. Each recommendation provided the restaurant’s location, price range, a brief description and some “must-try” dishes – although the latter were sometimes a little outdated. Still, it’s a great starting point in an unfamiliar city. 🍴



12.00

29



Build your own business

There's a lot to do when you're starting a business, from generating a brand, researching rivals, to creating awareness across several platforms and setting up a presence online – ChatGPT can assist with it all

44 **Brand your business**

45 **Create a logo**

46 **Develop a marketing strategy**

48 **Generate social media content** **TUTORIAL**

50 **Master spreadsheets and presentations**

52 **Build a business website** **TUTORIAL**

Brand your business

Find a brilliant new name for your venture



Setting up an outdoor clothing business? Let AI help develop a brand.



Whether you're starting a business from scratch or just launching a new product, coming up with a new brand name is never easy. ChatGPT can help you find the standout brand name you've been searching for.

A word of warning before we proceed: ChatGPT doesn't have an exhaustive database of existing brand names to cross-reference, and while it's highly unlikely to suggest you call a new fast-food chain Burger King, for example, ensure you carry out the proper legal checks before committing to any brand name.

BRAINSTORMING BRANDS

If you're struggling to find a brand name for your new business or product, or just want to see if the AI can deliver something stronger than your own ideas, you can drag it into a brainstorming session. Give the AI the key values of your brand and see what it can deliver.



I'm launching a new clothing brand for men. It's a luxury brand aimed at men in the 35-55 age group, with a strong focus on outdoor wear such as coats, jumpers, caps. It's based in the Scottish Highlands and has a strong eco-friendly focus. Suggest 10 possible brand names.

The brand names suggested by the AI include Glen & Stag, EcoHarrier, Loch & Timber and WildThistle, which all contain elements of the Scottish/outdoors/eco-friendly branding for which we were searching.

If you don't like its suggestions, you can ask for more, or you can ask it to riff on a brand that you like but you believe hasn't quite nailed it:



I like WildThistle, but it's not quite right. Can you suggest five similar alternatives?

Now we get Thistlewood, Thistle & Roam and WildHeather, among other options. Keep iterating until you nail it.

GENERATE A SLOGAN

It isn't only the name that AI can help you with, but a slogan that you might want for your brand. Once you've settled on a name – or perhaps even before – see what ChatGPT can do with a tagline.



Let's go with Thistle & Roam as the brand name. Can you come up with five catchy slogans for the brand?

Here ChatGPT suggests a selection of taglines, including "Roam Freely. Dress Boldly." and "Eco-Luxury for Life's Greatest Expedition." Again, you can iterate with alternatives until you hit on the right combination.

You can even ask the AI to help outline the brand's values, creating a "brand wheel" that defines the key elements of the brand and what it stands for.



Create a brand wheel for Thistle & Roam

Here it suggests "inner circle" brand values such as "adventure" and "elegance", with "outer circle" brand benefits such as "responsibly sourced materials" and "confidence in wearing high-quality, well-crafted clothing". You may want to tweak such suggestions, but it's a good way to start defining the brand values of your new business. ☺

Create a logo

Get inspiration for a new look for your business

E

very business needs a logo, something that immediately identifies the brand. ChatGPT's DALL.E drawing tools allow it to deliver ideas of what your logo might look like.

First, a little expectation setting. ChatGPT isn't going to deliver a fully fledged logo that you can use right away in your marketing. It isn't (yet) capable of delivering images at sufficient resolution or the formats you'd need for a professional-looking logo. But it can provide the inspiration, which you can either tweak and create for yourself, or use to show a professional designer of the type of logo you're looking for.

Relay your brand's values and ChatGPT will even mock up some visuals.

ESH
THISTLE & ROAM
LUXURY OUTDOOR WEAR
SCOTTISH

GENERATE A LOGO FROM SCRATCH

You can feed ChatGPT information about your brand and see what it comes up with. If you've already used ChatGPT to drum up a brand name and identity, as we did on the opposite page, you can even continue the same conversation to create a logo.

Can you create a logo for the brand Thistle & Roam?

Here, the AI already knew it was a luxury Scottish clothing brand aimed at men, so it's used those stored details as inspiration. If you're coming at this fresh,

you'd want to include the brand's key values in the prompt.

As you can see, the AI has created a brand image in-situ, surrounded by hints of clothing. As you can also see, it isn't perfect. For example, there are obvious glitches in the text (a common AI imagery flaw), but it's clear enough to give you something to work with.

ChatGPT's picture editor also lets you tweak the design. Say, you want to remove the established date on either side of the thistle. You can click the paintbrush icon above the image, paint over those areas and then type "remove these items"; the AI should make them disappear.



ADOPT A CERTAIN STYLE

You might already have an idea for the visual style you'd like for your logo. If so, grab an image of that style and then ask ChatGPT if it can create an image in that vein. Note that mimicking the style of other well-known brands could be regarded as passing off, so don't ask the AI to copy, say, the Apple logo.

Can you create a logo for my coffee shop using the same visual style as you see in the attached image?

Click on the paperclip icon to attach an image to your prompt. We gave it the drinks artwork above, and after a few attempts we got potential logos such as the two shown here. You can keep refining until you hit upon something you like. 📎



Develop a marketing strategy

Get your business noticed with the help of AI



It's all well and good starting a new business or launching a fresh product, but unless people

know about it, it's rather like the old conundrum of whether a falling tree makes a noise if there's nobody there to hear it.

A marketing plan is essential for any new venture, but if you don't have a marketing background, or shy away from self-promotion, it can be tricky to get noticed. ChatGPT can certainly point you in the right direction, not only helping to create a marketing strategy, but also with its implementation (we'll come on to creating social media content next).

Don't let a great business idea wither. Here's how to set about creating a marketing plan.

FIND A USP

There are very few unique businesses or ideas out there. Almost every business has direct competitors, and finding a way to differentiate yourself from them can be a challenge. If you're struggling to identify a unique selling point (USP) for your business, ChatGPT can drum up ideas on demand.



I'm launching a new Italian restaurant in York. I want to find a USP for the restaurant that will tempt customers away from our more established competitors. Can you suggest some ideas?

This prompt generated several strong suggestions, including a "wine & dine experience", where you offer a curated wine with each dish; "gourmet street food", where the menu is supplemented with Italian street food items such as paninis and arancini that could attract a different audience at lunchtimes; or social dining, where the whole table shares large platters instead of ordering separately.

If you're struggling to find ways to differentiate your business, ChatGPT might just spark an idea that your competitors haven't already latched on to.

ANALYSE THE COMPETITION

Before you decide to launch a business or product, it's vital to find out what the competition is up to. ChatGPT can help with basic background research. Let's take our restaurant example from above.

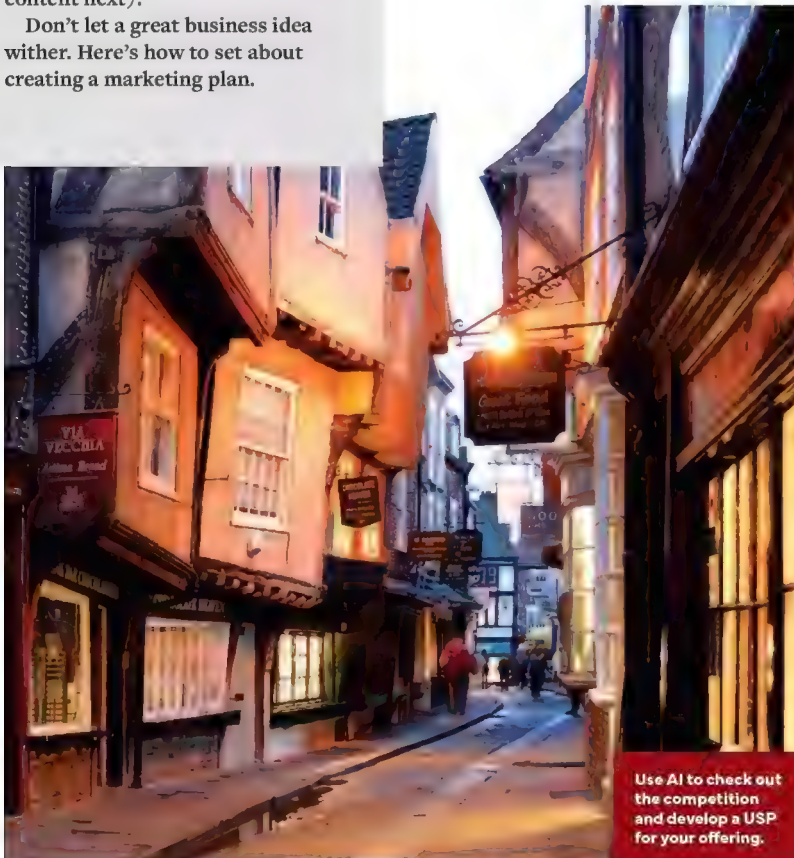


Examine the competition for my Italian restaurant in York.

This prompted ChatGPT to search six different websites related to York/Yorkshire dining, focusing specifically on the Italian competition.

It came back with a snapshot of five different Italian restaurants in the city, highlighting the key features of each. La Vecchia Scuola, for example, is a "fine dining spot housed in a 300-year-old building and emphasizes a sophisticated atmosphere alongside a menu blending classic and contemporary Italian cuisine".

At the very least, it could provide a hitlist of competitors to visit and analyse, helping you to ensure that your own business/product stands out from what's already out there.



SET SMART MARKETING GOALS

So, we've found a way to differentiate ourselves from the competition; now it's time to create a marketing plan.

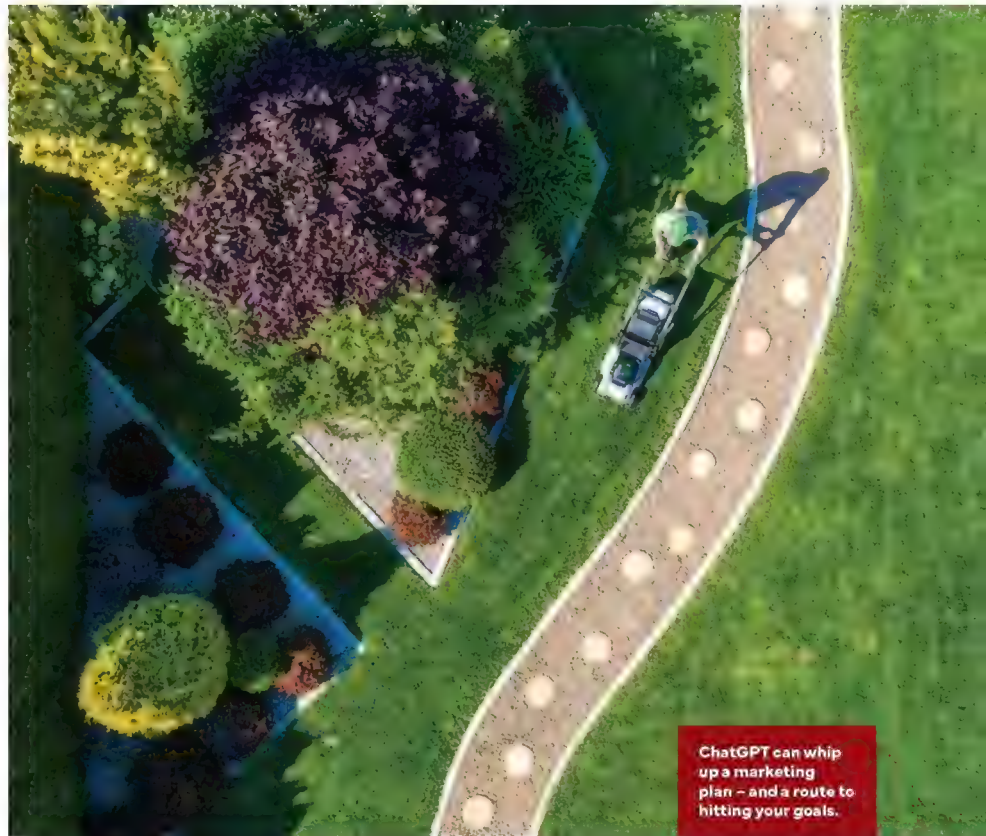
SMART is one of the well-known frameworks for marketing plans, ensuring that you set goals that are Specific, Measurable, Achievable, Relevant and Time-bound. You can ask ChatGPT to help set SMART goals for your business.

Let's switch industries and see what it can do for a landscaping business. If it's the first time you've talked to ChatGPT about this particular venture, so it doesn't have any details in its memory, you need to flesh out the specifics of the business to help it formulate a plan.

I'm launching a new landscape gardening business in Chelmsford, Essex. We're targeting high-end customers who have the budget to create their dream garden. We can cover both garden design and the landscaping itself. Help me create SMART marketing goals for the business.

Here, ChatGPT created five SMART goals, one of which was generating qualified leads. The "specific" was using a form on the company's website for potential customers to get a free 30-minute garden consultation; the "measurable" was a target of 20 qualified leads per month; the "achievable" was promotion of the offer through email campaigns and targeted social media; the "relevant" was the conversion of consultations into high-value projects; and, finally, the "time-bound" was a monthly measurement of the goals for six months.

Of course, you might want to adjust these plans and targets, especially those that involve marketing budgets; but it's a great starting point.



Once you've found a way to differentiate your business from the competition, you can ask ChatGPT to help set SMART goals

CREATE A CALENDAR

Once you've finalised the SMART marketing plan, it's time to put it into action. To help keep things on track, you can ask ChatGPT to create a marketing calendar – based on the timelines you've already established in the plan – so that you know what to tackle on a month-by-month basis.

In the same conversation in which you established your marketing plan, you can ask ChatGPT to:


Create a marketing calendar based on the plans above.

If you've heavily edited the plan in, say, Microsoft Word, you can ask the AI to create a marketing calendar based on the following plan and then paste it

in, or attach the document using the paperclip icon.

When we did this for the landscaping business's marketing plan, we were given a calendar broken down into six months, with precise instructions on what was required in each week of the month. For example, our first job in the first week of the "Month 1: Launch Phase" was to "perform an SEO audit and identify high-end keywords (for example, 'luxury garden design Chelmsford')".

If you've never done an SEO (search-engine optimisation) audit before, you can ask the AI for guidance.

You could also ask the AI how to input each of the tasks it's created into a service such as Trello, which helps you/your team keep on top of the tasks involved in a particular project, such as implementing a marketing plan. 

Generate social media content

Make social media posting less painful with AI assistance

➔ Social media is a critical part of the marketing mix for almost every business these days (although, granted, it may look a little insensitive for funeral directors to be on X). However, generating content for social media is a time-consuming business, which is the reason the majority of big firms have staff dedicated to this area alone. If your business can't afford a social media manager,

ChatGPT can step into the breach on a much smaller salary – and without taking six weeks off each year. Not only can it generate copy and images for the various social media networks, but it can help you time them for maximum effect.

It can also help you master the various social media advertising networks, to ensure your new business or products are reaching a precisely targeted audience.

1 Write social media posts

If you're launching a new business, finding the time to write a series of social media posts for the different networks can be tricky. However, if there's one thing the AI excels at, it's bashing out copy within seconds. Let's say, for example, we're opening a new coffee shop. We could ask ChatGPT to write a series of posts leading up to the opening, trying to tempt customers through the door with a promotional offer. Try a prompt such as: "Help me to write a series of posts to use on X to promote the opening of our new café on Friday. As a promotional offer, we're offering anyone who uses the code NEWCAFEX 25% off their order. The café is called The Slurp and it's based in Preston Street, Brighton." As you can see, the AI delivered a series of tweets we can post every day in the run-up to the opening, complete with eye-catching emojis and relevant hashtags.

Post 3 (Thursday)

📅 1 day to go! The Slurp opens TOMORROW on Preston St! 📍 Come down and get 25% OFF with code NEWCAFEX.

See you there, Brighton! ☺️

#TheSlurp #CafeOpening #BrightonEats #BrightonCafe

Post 4 (Friday - Morning)

☺️ The Slurp is OPEN! 📍 Drop by Preston St, Brighton today & enjoy 25% OFF your order with code NEWCAFEX. Don't miss out! ☺️

#BrightonCafe #TheSlurp #CafeOpening #CoffeeBreak

Post 5 (Friday - Afternoon)

We're OPEN! 📍 Swing by The Slurp on Preston St for your afternoon coffee & snack! ☺️ Remember, you get 25% OFF with code NEWCAFEX.

#BrightonCafe #TheSlurp #CafeLife #BrightonEats

Post 2 (Wednesday)

📅 The countdown is on! Only 2 days until The Slurp opens on Preston Street! 📍 We're so excited to welcome you all.

And don't forget, we're giving you 25% OFF your order when you use the code NEWCAFEX.

Tag your friends below and make plans to visit us this Friday! ☺️

#BrightonCafe #TheSlurp #CoffeeLovers #CafeLife #BrightonFoodies

Post 3 (Thursday)

📅 1 DAY LEFT!

The Slurp opens its doors tomorrow, and we're ready to serve Brighton's finest coffee and treats! ☺️

Enjoy 25% OFF your order when you use the code NEWCAFEX at checkout.

Be sure to stop by and say hi!

#BrightonCafe #TheSlurp #CafeOpening #BrightonEats

2 Tailor posts for different networks

So now we have a series of posts for X, but each social network has its own characteristics and demands. So, instead of cutting and pasting the same posts into Facebook, let's ask the AI to generate a fresh set tailored for that network. We ask ChatGPT to "alter these posts for Facebook" – and it delivers a fresh set with content that would work better on the new network, such as longer posts and invites to "Tag your friends below and make plans to visit us this Friday", which works best on Facebook.

3 Target specific audiences

It isn't only different networks we can target, but different audiences, too. Let's say we want to attract students to our café, because Brighton has two universities in the city. We can ask ChatGPT to write a new set of tweets pitched specifically at that audience. "We want the café to appeal to the new students in the city. Can you write five X posts specifically targeting students?" Now we get a fresh set of posts, with student-specific hashtags such as *#freshers2024* and *#BrightonStudents*.

Post 3

Need a break from studying? Come chill at The Slurp on Preston St! ☕ Grab a coffee, plug in your laptop, and enjoy 25% OFF with code NEWCAFEX. The best study vibes in town! 📖
#BrightonStudents #StudyBreak #TheSlurp #StudentDiscount

Post 4

Freshers! Looking for a new hangout? The Slurp is now open on Preston St with 25% OFF for all students using code NEWCAFEX. Perfect for post-class coffee runs! ☕
#Freshers2024 #BrightonStudents #TheSlurp #BrightonEats

Post 5

Student life = coffee life ☕ Start your new uni year with 25% OFF at The Slurp on Preston St using code NEWCAFEX. Study, chill, or meet new mates—this is your new go-to spot! 📖
#BrightonStudents #UniLife #TheSlurp #CafeVibes

Post 4

Freshers: If you're looking for a new hangout or study spot, The Slurp on Preston Street has you covered. Get 25% off with code NEWCAFEX. Drop in anytime.
#BrightonStudents #Freshers2024 #TheSlurp

Post 5

Coffee and deadlines go hand in hand. Get 25% off at The Slurp on Preston Street with code NEWCAFEX. Whether you're cramming or catching up with mates, we've got you sorted.
#BrightonStudents #TheSlurp #CafeLife

4 Change the tone

How can we put this? AI-generated social media posts tend to be a bit twee. If you want the AI to adapt the tone of its messaging, make it less saccharine, then don't be afraid to instruct ChatGPT to rein it in, with specific feedback. "Can you make these messages less twee?" resulted in ChatGPT dropping the cutesy emojis and writing plainer-speaking messages for our students. It might have gone a bit too straight – there's no harm in the odd coffee cup emoji – but it's a tone less likely to send a cynical student straight to Starbucks instead.

5 Add images

Social media posts have more impact with images. If you're promoting a new venue or product, it's always better to have genuine images rather than AI-generated ones; but, sometimes, needs must. We can easily call ChatGPT into action for the types of image you might otherwise get from a stock library. "Generate a close-up image of coffee beans for a Facebook post." This process can be hit-and-miss. And despite us telling ChatGPT it was a Facebook post, it's put the image in a square format, rather than the landscape images that work best on Facebook, so we've asked for a wider alternative. Still, we got there in the end...

Generate a close-up image of coffee beans for a Facebook post



Here is the close-up image of coffee beans for your Facebook post! Let me know if you'd like any adjustments.

Make it wider for a Facebook post

4. Budget and Bidding

- **Budgeting:** Start with a daily or lifetime budget, depending on how long you plan to run the campaign. Test different ad sets to see which performs better.
- **Bidding Strategy:** Choose between impressions, clicks, or conversions based on your campaign goals. For a new café, focusing on brand awareness and foot traffic is key.

5. Timing

- **Ad Schedule:** Run ads during peak times when people are likely to visit (e.g., mornings, afternoons, weekends).
- **Campaign Duration:** Test your ads over a couple of weeks to understand what resonates with your audience and optimize accordingly.

6. Local Relevance

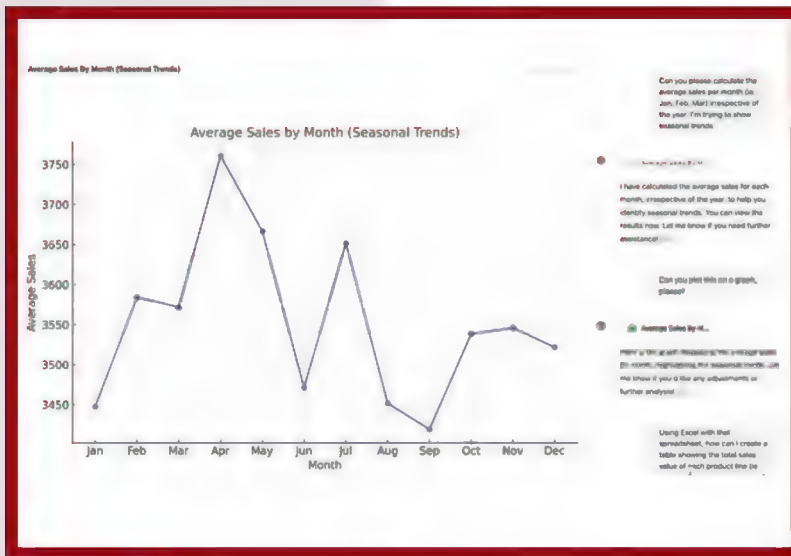
- **Geotargeting:** Set the radius around your café, like Brighton, Hove, and student areas such as the University of Sussex and Brighton University campuses.
- **Promotions:** Offer local promotions, such as student discounts, free Wi-Fi, or loyalty programs to attract foot traffic.

6 Run an ad campaign

Often the best results on social media come from advertising, rather than general posts, because you can target your message at specific audiences. If you've never run a social media ad campaign before, ChatGPT can offer tips and advice. "I'm thinking of running a Facebook ad campaign to attract customers to our new coffee shop in Brighton. What factors should I consider?" This prompt returned a clear overview, including advice on targeting certain demographics, the correct ad formats, budgeting and bidding, and more. It even offered advice on geotargeting the universities in the Brighton area. It's worth asking ChatGPT for advice on how to run A/B testing too, since this can help you work out which ads are the most effective. ☺

Master spreadsheets and presentations

Analyse your business performance and create powerful presentations



Baffled by numbers?
Use ChatGPT to translate the data into a graph for you.

AI NUMBER CRUNCHING

ChatGPT is extremely proficient at spreadsheets, even large data sets. Nothing in life is flawless, but it's extremely reliable when it comes to number crunching.

For example, we uploaded a spreadsheet of dummy sales data for a fictional vehicle manufacturer, which contained 2,700+ rows of sales data, showing order numbers, quantities, sales values, order dates, product type, customer details and more.

Once uploaded (using the paperclip icon in the prompt window), we could ask ChatGPT all sorts of questions about the data, such as:

Can you calculate the total sales for each year?

Name the 10 customers with the highest total sales value.

Can you calculate the average sales per month (ie. Jan, Feb, Mar) irrespective of the year? I'm trying to show seasonal trends.

You can see with this last prompt that we're going to pains to explain precisely what we want, so that it doesn't calculate the average for Jan 2022, Jan 2023, and so on. Once it had worked out the monthly average, we also asked the AI to "plot this on a graph", saving the bother of having to do it in a spreadsheet.

FORMAT SPREADSHEETS

Half of the battle with spreadsheets is that you often know what you want to do, you just don't know what the feature might be called or where to find it.

ChatGPT is brilliant at parsing plain English explanations and translating them into Excel functions, giving you step-by-step instructions on how to get there. For example:

How do I format a spreadsheet so that the column width fits the content of the cell?

In Excel, how do I prevent the first column of data from moving when I scroll across the spreadsheet?

On the second query, ChatGPT showed us how to find Excel's "freeze first column" facility, tucked away in the View menu, so we could achieve what we wanted without knowing its name.



spreadsheets are one of those things that everyone has to use, but few people know how

to use them properly. And that's because Microsoft Excel and its like are more difficult to grasp than a bunch of nettles.

Fortunately, you now have an assistant that's a dab hand with the spreadsheets. And, to a lesser extent, PowerPoint presentations, too. You no longer need to stress because you can't work out how to do something; just ask the AI for help – or, better still, get it to do the task for you.

We'll show you how the AI can help you stay on top of the numbers and present them to the board!

GETTING THE RIGHT FORMULA

It's all well and good getting the AI to crunch the numbers for you, but sometimes you want to know how to do it yourself.

Let's take our vehicle sales spreadsheet once more. We might want to calculate the total sales value of each product category in our spreadsheet, but we don't know the best way to achieve this in Excel. But we know an AI that does...

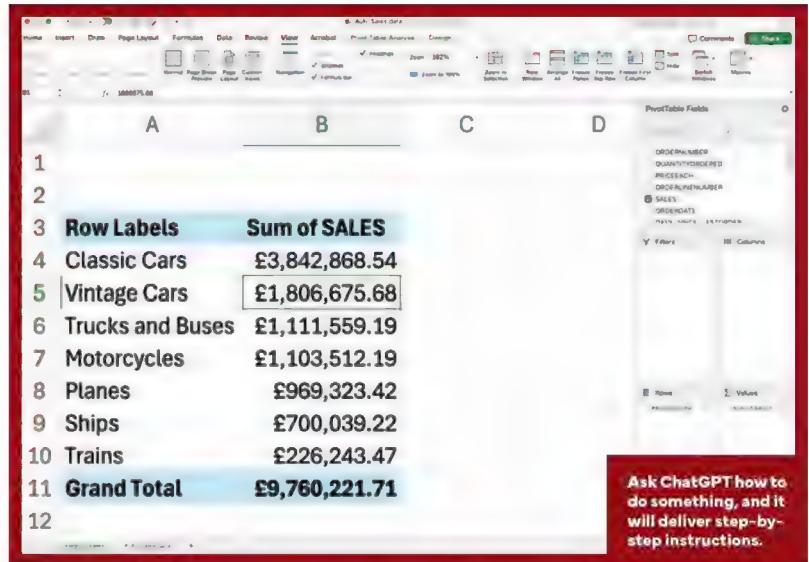
Using Excel with that spreadsheet, how can I create a table showing the total sales value of each product line (ie. motorcycles, classic cars, and so on)?

"That spreadsheet" in this prompt is the sales workbook we've already uploaded earlier in the conversation. On the back of this prompt, ChatGPT explained how to calculate this data using a pivot table, a very powerful function in Excel that isn't always easy to use. We were given step-by-step instructions, and within a minute or two had the data we needed in Excel, with the knowledge on how to do it ourselves next time.

ChatGPT is also great at spitting out the formulas required to complete tasks, particularly if you ask the new GPT reasoning model.

In an Excel spreadsheet, I have a column for "customer name" and a column for "order date". I want to create a column of "days since last order", which updates automatically based on today's date. How do I do this?

Here, ChatGPT explained how to insert two different formulas to calculate the necessary information. You can copy the code straight from ChatGPT into Excel, although often you'll need to adjust the formula to match where the data lives in your own spreadsheet, but ChatGPT talks you through this.



Row Labels	Sum of SALES
Classic Cars	£3,842,868.54
Vintage Cars	£1,806,675.68
Trucks and Buses	£1,111,559.19
Motorcycles	£1,103,512.19
Planes	£969,323.42
Ships	£700,039.22
Trains	£226,243.47
Grand Total	£9,760,221.71

BETTER PRESENTATIONS

ChatGPT can open and interact with PowerPoint files, but to be honest, it isn't as adept at dealing with them as it is with spreadsheets. Neither can it create a PowerPoint presentation from scratch. It's most helpful when you feed it one of your presentations and ask for advice.

Can you suggest ways to improve this presentation?

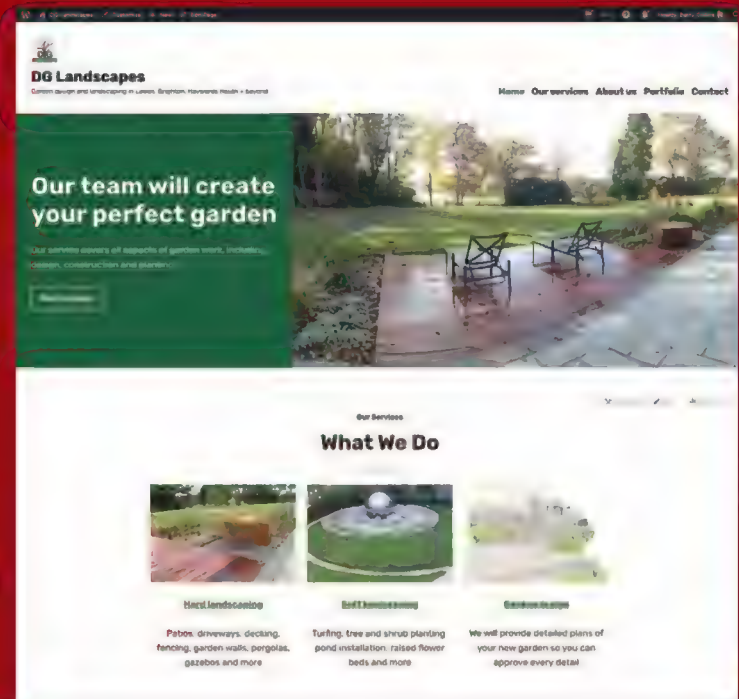
Here, ChatGPT came back with a range of solid advice, including how to reduce clutter in our presentation, adding transitions (such as fades) between slides, correcting the odd typo, and even suggesting that we include a QR code that unlocks our contact details at the end of the presentation, so that the audience can easily get in touch.

When we asked for further instructions on how to add a QR code, it pointed to online services that can turn your contact details into a QR code and showed us how to embed the image in the presentation, and even how to style it so that it fits in with the rest of the slides.

ChatGPT can open and interact with PowerPoint files... it's most helpful when you feed it one of your presentations and ask for advice

Build a business website

Put together a professional-looking site with ChatGPT's guidance



→ Building a website has become much easier over the years, but it's still a daunting prospect if you've never done it before. Relax, because ChatGPT will hold your hand and guide you through the entire process of creating a site from scratch.

Whether you're looking to simply showcase your business with a portfolio-style website, or even sell goods online, ChatGPT can steer you through the process. It knows how to use all of the popular website builders, what to look for when registering a website address, and how to tailor a site to your precise requirements. It can even write small bits of computer code to create bespoke features for your site.

ChatGPT is capable of building an entire website by itself, writing all the code you need for a basic business site. However, we suggest you don't do that. It's far easier to use a website builder package (or content management system, as they're known in the trade) such as WordPress, Wix or Squarespace.

These systems are relatively simple to use; they don't require you to be a coding wizard, which means there's much less potential for things to go wrong if you're not familiar with the HTML and CSS code required to build a website. Professional web developers will also be familiar with services such as WordPress, so if you decide you need help to take your website to the next level in the future, you won't have to start from scratch again.

Here, we'll guide you through

the entire process of building a site with ChatGPT, right from the very first steps to the finishing touches. We're using the example of a landscape gardening business, but the same principles can be applied to pretty much any type of small business website.

When you're working on a project such as this, it pays to keep all of your prompts in the same ChatGPT

conversation. That way, when you ask a question like, "how do I add social media icons to my website?", ChatGPT knows the website you're talking about, what service you're using to build it, and so on, saving you from having to explain from scratch each time. You can return to past conversations at any time and pick up where you left off. The search chats facility can help you find the right chat.

1 Choose a platform

1. Wix

- **Why Use It:** Wix is a popular website builder with a user-friendly drag-and-drop interface. It offers numerous templates, including those tailored for landscaping businesses.
- **Key Features:**
 - **Templates:** Professionally designed templates suited for showcasing services and portfolios.
 - **Customization:** Easy to customize layouts without needing coding skills.
 - **Photo Galleries:** Ideal for displaying your past landscaping work.
 - **Contact Forms:** Pre-built forms to make it easy for clients to get in touch.
- **Price:** Free plan with Wix branding, premium plans starting around £3-£10 per month for more features and removing ads.

2. Squarespace

- **Why Use It:** Squarespace is known for its elegant designs and templates, making it a great choice if you want a visually appealing website.
- **Key Features:**
 - **Design:** Beautiful, clean templates, perfect for showcasing high-quality images of your gardening projects.
 - **Portfolio Section:** Built-in tools for creating galleries to display your past work.
 - **Mobile-Responsive:** All templates are automatically optimized for mobile devices.
 - **Contact Forms:** Easy to set up forms for client inquiries.
- **Price:** Plans start from £10-£15 per month.

3. WordPress.com

- **Why Use It:** If you're looking for more flexibility and the potential for scalability in the future, WordPress.com is a robust platform that can grow with your business.

The first big decision with any website is which service to use. ChatGPT can offer advice, if you tell it what you want the website to do. "I'm building a website for my landscape gardening business. I want to show clients what services we offer, show photos of past work, and tell them how to get in touch. Which service should I use to build my website?" On the back of this prompt, the AI suggested a host of services, listing their key strengths. We're going to plump for a WordPress website, hosted on WordPress.com.

2 Select a plan

WordPress, as with most website building services, offers a variety of plans at different price points. But which to choose? When we asked ChatGPT which of the various plans would be best for our landscaping business website, it sensibly advised to go with the Business plan, noting that it offered the option to install custom themes and plugins that allow you to better tailor the website, as well as search engine tools and e-commerce support. It also removes ads that can make your site look unprofessional.

3 Pick a domain name

Don't underestimate how important it is to get the right web address (or domain name) for your site. Many people rush this decision and regret it later. ChatGPT can help you get the name right. We asked: "I'm creating a site for a Sussex landscape gardener and designer. What would you suggest for a domain name?" ChatGPT came back with several strong suggestions, such as SussexLandscapes.co.uk, SussexGardenDesigns.com and SussexLandscapingExperts.com. These are good suggestions, because having keywords such as "landscaping" in your domain name can boost your Google rankings for that search term. What's more, a follow-up prompt of: "Can you check if these are available?" revealed that nine of the names were available to register. We checked the results, and they were indeed.

4 Register your domain

Once you've chosen your domain, the next step is to register it. WordPress.com includes domain registration with its Business plan, but how do you actually do it? "Can you tell me how to register my domain with WordPress.com?". This not only gave us instructions on how to register the domain, but added valuable information such as how to protect our personal information when registering and ensuring that automatic renewal is switched on, so that you don't lose the domain when it expires in a year or two's time.

Here's how it works:

- Choose a WordPress.com Plan:** WordPress.com offers several plans (Free, Personal, Premium, Business, and eCommerce). Custom domain registration is included with most paid plans.
- Search for and Register Your Domain:** During the setup process, WordPress.com will prompt you to choose a domain. You can search for available domains and register one directly through the platform.
- Domain Privacy:** WordPress.com also offers free Domain Privacy for domains registered through their service, which helps protect your personal information.
- Automatic Renewal:** Domains purchased through WordPress.com are set to automatically renew annually, ensuring you don't lose your domain when it expires.

If you already own a domain registered elsewhere, WordPress.com also allows you to connect or transfer it to their platform.

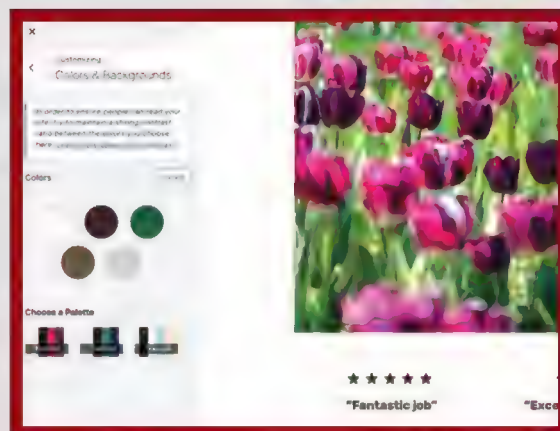
For more details, you can visit WordPress's domain registration page at WordPress.com.

5 Pick a theme

The first big job on any WordPress website is choosing a theme. The theme dictates the overall look and structure of the website. You can tweak the theme to, say, change a colour scheme, but you want to pick a theme that's as close to your desired look as possible. ChatGPT can offer advice. "Can you help me pick a theme for my website?". The AI came back with sound advice on where to find themes, as well as recommending five portfolio-style themes to look at for our landscaping site, as well as instructions on how to install our chosen theme. ➔

6 Brand the site

We've decided to go with the Barnsbury theme for our website; but when you first install a theme, it's stuffed with dummy text, images and copy. We need to start making this website our own. Let's start with branding it and uploading the company logo. "How do I add the company logo to the website?" Here, we get instructions on how to edit the site's header – the part of the website that appears at the top of the screen. We're shown how to add a logo and the company name, as well as the layout of the header itself.

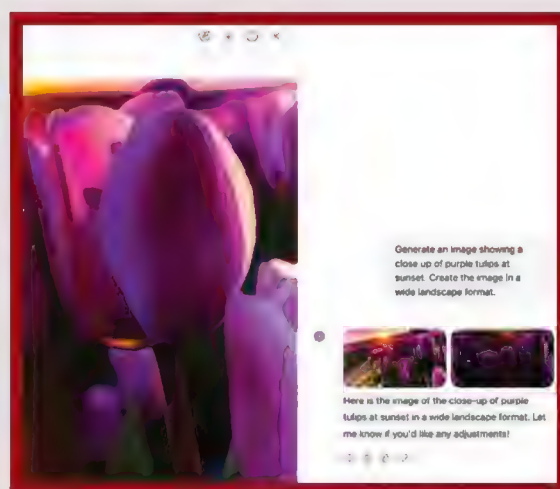


7 Tweak the colour scheme

What if we want to change the default colour scheme of the website's theme to something different? Again, our AI friend has the right advice. "How do I tweak the colour scheme of the website?". Here, we get tips on where to find the site colour settings in WordPress, so that we don't just change the colours for one page, but right across the site. ChatGPT goes the extra mile here, too, explaining various ways to change colours for different elements (some more techy than others) and giving tips on colour selection. "Contrast is key: Make sure text and background colours contrast well for readability (e.g. dark text on a light background)," we're advised.

8 Help with writing copy

So, we've got the branding and colour scheme sorted, now to start filling out the site. For example, we want to create a page outlining our services and what they can offer customers. To save writing this from scratch, potentially with spelling and grammar errors, we can give ChatGPT a few bullet points of the services we'd like to highlight and ask it to write the copy. It's worth giving the AI some pointers on the tone. (ie. "Make the copy friendly and personable, and tailored for a British audience")



9 Create website images

Although we want to sprinkle our website with actual photos of landscape gardening projects we've completed, we also need some generic images of things such as flowers to go in the background of headers, for example. Before AI, we might have chosen from a stock image library, but now we have the ability to generate the exact images we want. So, for example, we can ask: "Generate an image showing a close-up of purple tulips at sunset. Create the image in a wide landscape format." This generated a couple of very usable images that can be used in the backdrop of our website pages.

10 Add a contact form

As well as splashing our email address and phone number on the Contact Us page, we also want to build in a contact form, so that customers can message us right away without leaving the site. But it isn't always easy to work out how to do this with WordPress. "How do I add a contact form to the website for customers to get in touch?" This prompt delivers clear instructions on how to add a form "block" to the Contact Us page on the site, with details on how to customise the form to our specific needs and how to make fields "required", so that potential customers must enter a name and email address, for instance.

Contact

To discuss your requirements and get a FREE quote from our experts, contact us using any of the forms below.

Get in Touch

Email: [input field]

Tel: [input field]

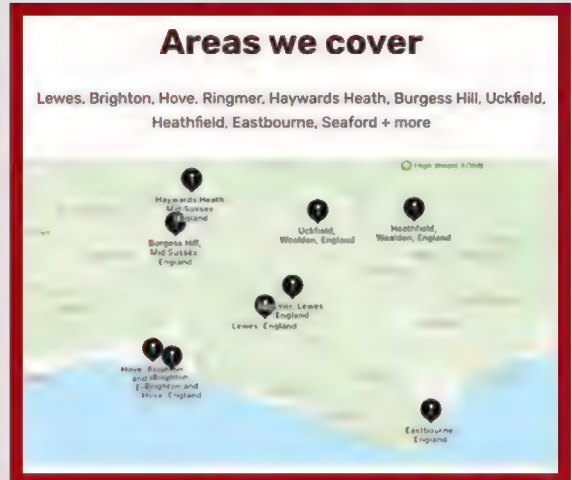
[Social media icons]

Send Us a Message

Name: [input field]

Email: [input field]

Message: [input field]

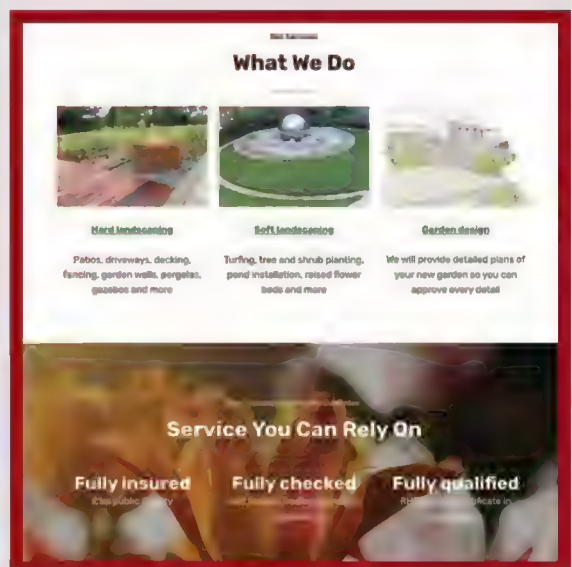
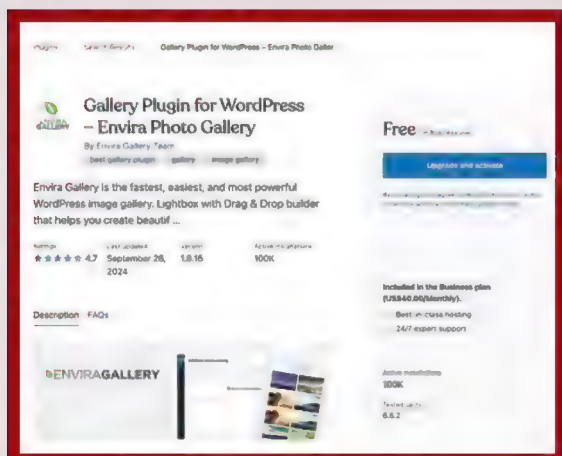


11 Add a map

If you're a venue or a shop, you might want to add a map to your website showing customers exactly where you are, without having to leave the website and open Google Maps, for example. In our case, we want to show the areas we cover. "I want to put a map on my website so customers know which areas we operate in. How do I do this?" ChatGPT runs through various options, with step-by-step instructions on how to create and embed custom Google Maps and others. In the end, we opt for Apple Maps.

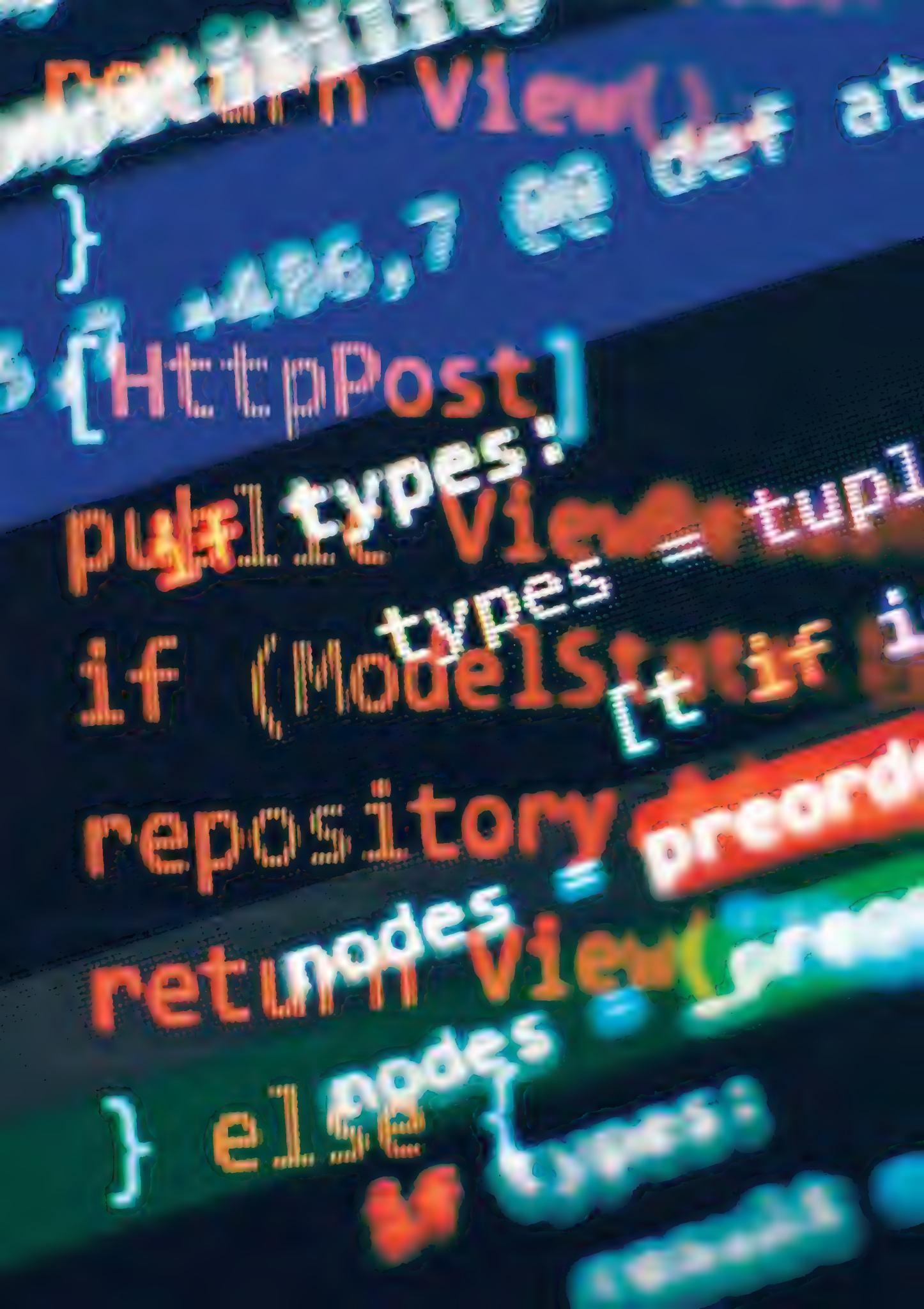
12 Manage plugins

One of the best things about building a site in WordPress is the plugins, which you might think of as little apps that add features to your site. But there are thousands of them, so we asked ChatGPT: "which plugins would you recommend for my site?". It picked 10 different options – and while you wouldn't want to use all of them, we particularly liked the suggestion of Envira Gallery to "show off before/after images of past projects or different landscaping designs", and WP Customer Reviews, which allows clients to leave reviews on the site. ChatGPT can show you how to install and manage plugins if you're unsure.

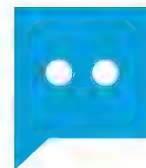


13 Finishing touches

There's almost an unlimited amount of things you can add or tweak on a website, and we haven't been able to show you everything in the space we have available. Nevertheless, we hope this has shown how ChatGPT can guide you through every step of the website creation process. The only thing left to do now is put the website live and start promoting it. Of course, ChatGPT can help you with both of those, too! 📌



```
def view()  
    [HttpPost]  
    types  
    if (ModelState.IsValid)  
        repository.Preorder()  
        return view()  
    else  
        types
```



Become a coding genius

Got an itch to learn coding, but don't want to dive into a 600-page tome? Then turn to ChatGPT! From tutoring you through the basics to developing apps and games, the AI will take you from coding newbie to coding whizz.

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Get started with coding

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How AI can correct your code

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Make a bill-splitting app

TUTORIAL

64

Create a chrome extension

TUTORIAL

66

Design a web word game

TUTORIAL

Get started with coding

Start your coding journey with help from ChatGPT



Although ChatGPT is perfectly capable of writing computer code, that doesn't mean you shouldn't learn to code for yourself. It's much the same principle as using a calculator for maths: just because it's capable of

doing all the sums for you, doesn't mean you shouldn't know how to add, multiply, divide and so on.

ChatGPT isn't only a crack coder, it's a great coding

tutor. It can help you pick a language to learn, assist with setting up your computer with everything you need, and give you a nudge along the path when you get stuck on coding problems.

ChatGPT is familiar with several popular coding languages, including Python, JavaScript and Go.

It's most at home with Python, however, which is the popular language we're going to use for most of this section.

PICKING THE RIGHT LANGUAGE

Choosing which programming language to learn will often come down to what you want to get out of it. For example, if you're considering a move into web design, then HTML and CSS might be your starting points. ChatGPT can help you pick the right language to study, although it's worth doing additional research to ensure that the AI's advice is sound.

.....
I'm considering a career as a data analyst. Which programming language should I learn?

.....
I want to learn how to code iPhone apps. Which programming language should I learn?

Budding data analysts could consider a variety of languages, including Python, SQL and R, according to ChatGPT, which seems to chime with most professional advice out there. The AI also recommends taking your Excel spreadsheet skills to an advanced level.

On the second prompt, ChatGPT shrewdly suggests learning Swift, a language developed by Apple specifically for developing apps for iPhone, iPad and Mac computers. "It's beginner-friendly, with a clean syntax and strong performance, which makes it great for both new and experienced developers," ChatGPT advises.



Fancy learning to code? ChatGPT can advise on the choices available.

PREPARING YOUR COMPUTER

Once you've decided upon the language, you'll need to set up your computer with the right tools to start coding. ChatGPT can definitely help with this process.

.....
If I want to learn Python, how should I prepare my Windows PC?

Here we get a step-by-step guide on how to install Python in Windows, where to find and download the free code editor Visual Studio Code, how to install

packages that will likely be needed during the learning journey, and other useful pointers, including online resources that could support your learning.

Don't lose heart if some of this looks complex or intimidating. For example, when you install Python, ChatGPT advises you to open a Command Prompt and type a command to check it's installed properly, but if you don't know what a Command Prompt is, let alone how to open one, ChatGPT can help. Just ask it to guide you through the process as a beginner.

HELP WHEN YOU GET STUCK

Whether you're taking a programming course or teaching yourself from books and/or online guides, you'll likely hit stumbling blocks. Self-learning is great, but if you run into a concept you don't understand, there isn't usually somewhere you can get an instant answer.

ChatGPT can definitely save you from having to ask questions in online forums or leaning on pals for help.

I'm starting to learn Python as a pure beginner, but I'm struggling to understand the difference between floats and integers. Can you help?

Here, ChatGPT provides a clear explanation of the difference between the two terms, describing that integers are whole numbers and floats are numbers with a decimal point.

It goes on to explain how you can use the type function to check the data type of any object in Python, with a sample of the code that allows you to check for integers, floats, strings and Booleans.

The beauty of ChatGPT is you can continue the conversation with follow-up questions to further your understanding. For example:

If you run into a concept you don't understand, there isn't usually somewhere you can get an instant answer. ChatGPT can help



You can prompt the AI to "help" with homework, rather than do it for you.

The `type()` function in Python is used to check the **data type** of any object. When you pass a value or a variable to `type()`, it returns the type of that value, helping you identify whether it's an integer (`int`), a float (`float`), a string (`str`), or another type.

Here's how it works in practice:

python

```
print(type(5))
print(type(5.0))
print(type("Hello"))
print(type(True))
```

Copy code

Don't know integers from floats? AI will have your confusion cleared in seconds.

Why use `type()`?

- **Debugging:** It helps you confirm what kind of data you're working with, which is useful for troubleshooting.
- **Conditions:** You can use it to check types in conditional statements (e.g., only do something if the data is of a certain type).

So, if I only wanted users to enter whole numbers, I could define an input field as an integer to prevent them using decimals?

Chat GPT explains that there's no way to directly define an input field, but that you can test if the figure the user entered was an integer and return an error message to the user if not, urging them to re-enter a valid whole number. It again provides the code that would do this to ease understanding.

CRACKING COURSE TASKS

Most coding courses and books explain a programming concept and then test you by having you complete a coding task. Again, it's easy to get stuck on these with no obvious place to turn for help.

ChatGPT can help you work through it; but if you ask it to directly solve a task it will effectively do your homework for you, not really helping you to learn. Instead, you can prompt it in such a way as to help nudge you in the right direction without giving the answer. For example:

My Python class has set me the following task: "Make a list of the numbers from one to one million, and then use `min()` and `max()` to make sure your list actually starts at one and ends at one million. Also, use the `sum()` function to see how quickly Python can add a million numbers." I'm sure I don't need to manually list every number, but I've forgotten how to create such a list. Without giving me the entire code, can you help jog my memory?

ChatGPT behaves like a good teacher here, reminding us that the range function can create a list of numbers between one and a million, without actually writing the code for us. 🙌

How AI can correct your code

ChatGPT can find flaws in your code and more



Make no mistake: computer coding isn't easy. Although the languages and the code editing software has become more friendly over the years, it's still a skill that many will find difficult to master.

Finding an error in a piece of code, but not being able to work out what the problem is, can be hugely

frustrating. Likewise, when you know there's a way to do something, but you're not quite sure how to code it.

ChatGPT is brilliant in both instances. Not only is it able to spot flaws in code you've written, it can work with you to rewrite code, making it do exactly as you intended in the first place. Below, we're going to run you through both of these scenarios.

The issue lies in the way the `calculate` function is referenced in your `button` element. You need to call the function with parentheses `()` to execute it. Additionally, I don't see the actual `calculate` function in the code you shared, so I'll assume it's intended to be in your JavaScript file (`script.js`).

Here's a corrected version of the HTML code, with the button's `onclick` attribute updated:

```
html
Copy code

<!DOCTYPE html>
<html>
<head>
  <title>VAT Calculator</title>
  <link rel="stylesheet" type="text/css" href="style.css">
</head>
<body>
  <h1>VAT Calculator</h1>
  <form>
    <label for="price">Price:</label><br>
    <input type="number" id="price" name="price"><br><br>
    <button type="button" onclick="calculate()">Calculate</button><br><br>
    <label for="result">Price without VAT:</label><br>
    <input type="text" id="result" name="result" readonly><br><br>
  </form>
  <script type="text/javascript" src="script.js"></script>
```

ChatGPT is a whizz at spotting errors in code, and can help correct them, too.

FIXING YOUR CODE

Here's a good example of how ChatGPT can help when you're getting started with coding and hitting brick walls. We've coded a basic VAT calculator using HTML, CSS and JavaScript – the common languages you'll use when coding for the web.

However, our VAT calculator has a problem. When we hit the "calculate" button to work out what an item would cost without VAT added, nothing happens, and we can't work out what we've done wrong.

ChatGPT to the rescue. We tell the AI:

This is a piece of HTML code I've written for a VAT calculator. But when I press the calculate button, nothing happens. Can you help me fix it?

We then paste our code into the chat window. ChatGPT immediately spots the flaw in the code – we've omitted the necessary parentheses in the button's code to correctly call the function. The AI not only provides us with the corrected code, it also goes on to provide the necessary JavaScript code required to perform the VAT calculation, in case we didn't get that right, too.

By the way, if you're tackling such problems, you might want to use the new Canvas function (which we'll come on to shortly), particularly if you're dealing with long passages of code.

Our VAT calculator has a problem: when we hit the calculate button, nothing happens. ChatGPT comes to the rescue

USING ERROR MESSAGES

Modern code editors (such as Microsoft's Visual Code Studio) are super helpful. When you run a piece of code and there's an error, you'll often get an error message in the terminal describing where it is and what's gone wrong. In fact, you'll see an example of this when ChatGPT itself makes errors in coding on the following pages.

However, beginners can find these error messages quite dense and difficult to interpret. ChatGPT can not only help you decipher what these cryptic messages mean, it can often fix the

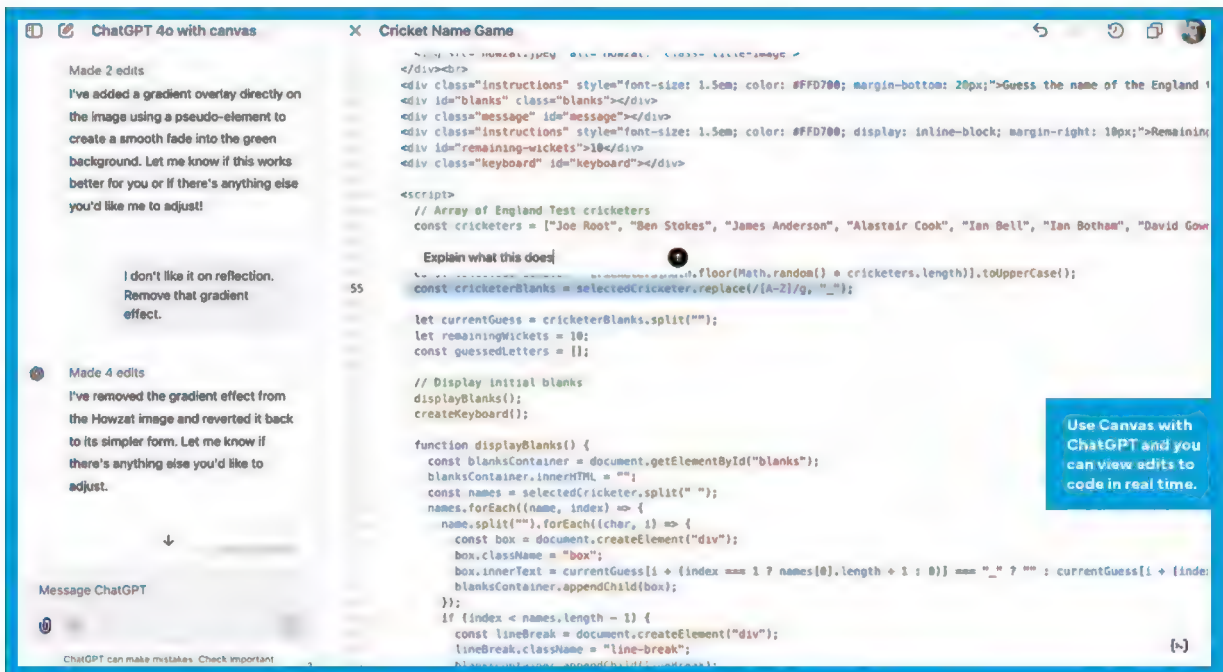
code itself, based on the content of the error message.

For example, during development of the bill-splitting app on p62, we ran into an error message after revising a section of the code. We copied the error message from the code editor and asked ChatGPT:

When I run the code, I'm getting: **attributeError: 'ExpenseSplitterApp' object has no attribute 'settlement_text'**

That error message didn't make any real sense to us, but ChatGPT eventually understood what was required to make the error message go away.

Note, that it didn't solve the problem the first time of asking – when we retested the app with the first code amendment ChatGPT made, the error message still appeared. However, when we told it the error message was still appearing, it adjusted other parts of the code and explained what it had changed and its reasoning. That solved the issue.



CODING WITH CANVAS

Canvas is a great new feature for collaboratively editing code or text with ChatGPT. You'll be able to select it from the dropdown menu at the top of the screen when you start a new prompt.

With the Canvas window open, the code is given a wide space on the right of the screen, and your chat prompts move to the left. You can ask the AI to make changes to the code and you'll see them made in real-time by the AI on the right.

Canvas has a few great features for coding novices. For example, if the real-time edits happen a little too quickly and you don't see what's changed, you can click the Show Changes button (a clock with an arrow around it) at the top of the

Canvas panel and it will highlight where any changes were made, allowing you to review them at your leisure.

If you don't understand what a particular line of code does, you can highlight it and a little Ask ChatGPT pop-up should appear. Click that and type:

Explain what this does.

You should get a clear explanation of the purpose of that particular line of code, and how it works.

Finally, at the bottom-right of the Canvas window, you should find a

button that conceals a range of options, including "fix bugs", which is fairly self-explanatory, and "port to a language", which allows you to translate code written in one programming language into another.

However, the most useful feature for beginners is "add comments", which goes through the code line-by-line, explaining what each line does; it's a fantastic learning tool. Those comments are added in the programming language's own comments syntax, so you can copy them into your code editor and keep them, but they won't interfere with the running of the code itself. ☺

Make a bill-splitting app

We show you how to create basic apps with ChatGPT

➔ Let's get down to the brass tacks of generating our first app – without having to write a single line of code ourselves!

We'll be creating an app that allows us to split the bill evenly at the end of a trip, making sure that nobody pays more than anyone else. You enter how much each person has spent and the app automatically calculates who owes what to whom.

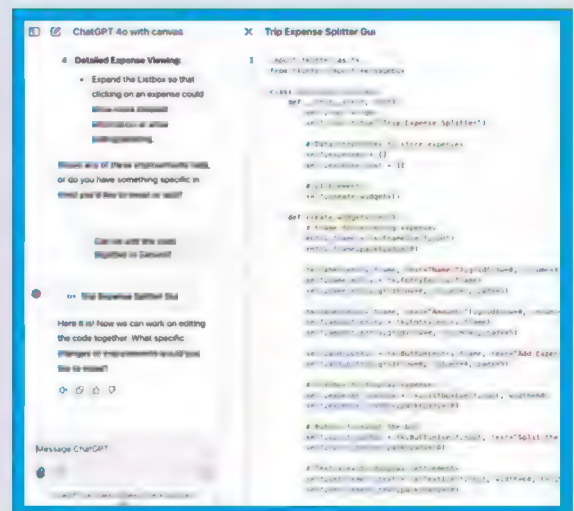
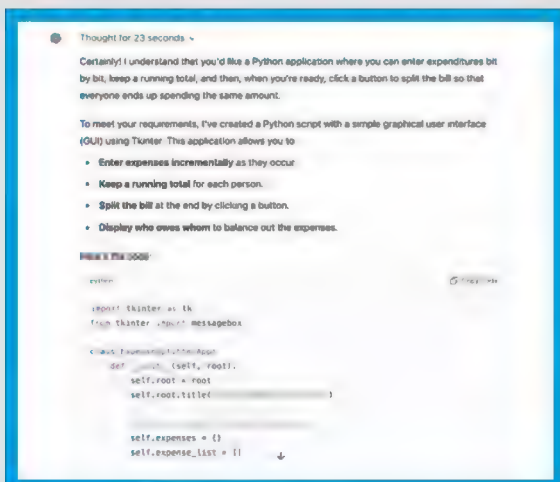
It's a basic app that we'll write in the Python language, which can run on any PC or Mac. To run the app you'll need Python installed, so see the section on preparing your computer on p58, if you haven't done so already.

This is just an example of the type of app you can write using ChatGPT. Feel free to experiment by creating different types of app for your own needs.



1 Generate the code

We start with a simple prompt telling ChatGPT what we're looking for in the app. At this point, it pays to keep the instructions relatively simple. Give it an overview of what you want the app to do and sweat the details later. "I'm on a trip with a group of friends. I want you to write a Python app that allows us to enter what each person has spent and work out who owes who, so that everyone spends the same amount of money at the end of the trip. Do you understand?" ChatGPT confirms it has understood the brief and generates the Python code for our app.

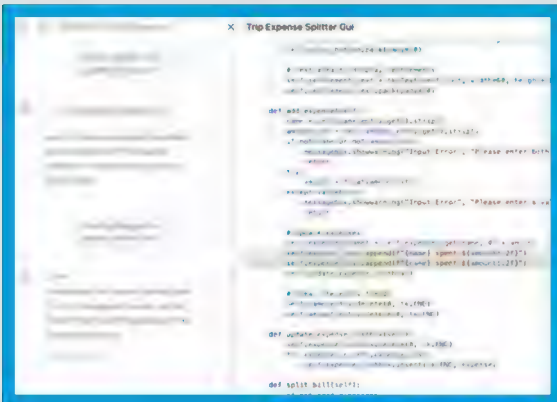


2 Start editing with Canvas

Unless you're incredibly lucky, the first piece of code generated by ChatGPT is unlikely to be perfect, or do everything you want it to do. But ChatGPT can help you edit the code. The service recently introduced a new feature called Canvas, where you can edit code or plain text in collaboration with the AI, seeing changes as they're made. We copy the code ChatGPT provided, start a new chat, selecting GPT-4o with Canvas from the dropdown menu at the top, and paste the code in, before asking if we can edit together in Canvas.

3 Change the currency

The first edit we want to make is a relatively simple one. When we ran the code that ChatGPT generated in step 1, the currency used was dollars. We want to make that pounds for our app, so in the Canvas chat we state: "I want to change the currency from \$ to £." ChatGPT makes the necessary edits to the code, and if you click the Show Changes button in Canvas (it looks like a clock with an arrow around it), it highlights the changes made in the last revision, so you can see what it's done.



4 Adding features

Our app is currently very basic and doesn't suffer fools gladly: if you make an error with an expenses entry, you're stuck! So we want to add a button that allows you to undo the last entry if you make a mistake. We ask for this and ChatGPT generates the code, but when we test the app with the new button, we notice that even though the undo button removes the entry from the list of expenses displayed, it's still kept in the app's database, meaning the calculations are wrong. We ask the AI to fix this bug and it does, but it highlights the importance of testing an app every time you make a change.

5 The restart button

Our app is now largely working as intended, but once you've pressed the "split the bill" button and it's calculated the expenses, you're stuck: we need some way to clear the slate and start again. So we ask ChatGPT to create a "clear all entries" button that wipes everything stored and allows us to start from scratch. It understands the instruction and amends the code accordingly, even creating a pop-up message telling you what it's done, without us asking.

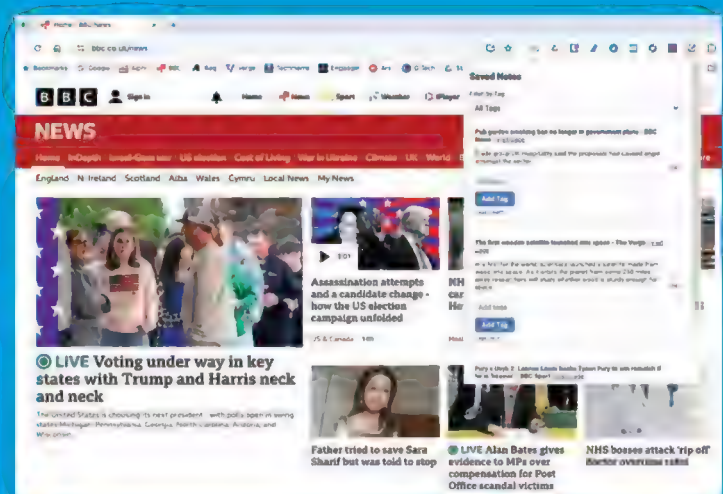


6 Give it a visual refresh

Finally, we want to work on the design of our app. It looks very drab and we don't like the position of some of the buttons. First, we ask the AI to move the "clear all entries" button to the foot of the window. Then we start tweaking the background colour and button design. It takes a lot of trial-and-error and reprompting before we get something we're vaguely happy with. We end up importing a ttk theme on the AI's advice to make it look smoother. It's by no means a work of art, but we have a functional app that looks respectable in the end.

Create a chrome extension

Boost your browser's abilities with a bespoke add-on



➔ Most of today's web browsers are stripped-back, feature-light affairs. If you want extra features, you have to go searching for extensions that bring new capabilities. However, instead of trying to find an extension that does exactly what you want, why not code one instead?

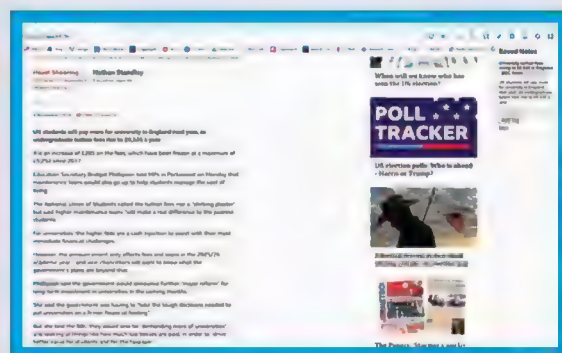
If the answer to that is "because I don't know how", ChatGPT can help. It's well versed in writing extensions

for Google Chrome, which can also be used in alternative browsers such as Microsoft Edge and Vivaldi.

We show you how to create a simple note-taking extension, but you can use the same process to generate a browser add-on that meets your own needs. A quick browse through the Chrome Web Store (chromewebstore.google.com) reveals the huge range of features that extensions can perform. You bring the ideas, and ChatGPT can help with the code.

1 Generate the starter code

We enter the following prompt into ChatGPT: "I want you to help me build a Google Chrome extension that captures research notes when I'm browsing the web. When I highlight text on a web page, I should be able to right-click and choose to 'save note' from a simple context menu. The extension should save the highlighted text, with the URL and page title, to local storage. Basic tagging functionality should also be included." The AI immediately comes back with the four different batches of code required and steps on how to install/run them in Chrome. We strongly advise you use a code editor such as Visual Studio Code to save and edit the code. If you need any help with this, ChatGPT can advise.



2 Test the extension

Once you've saved the various scripts into the required folder and installed the extension in Chrome (or alternative browser), the first thing you should do is test it. We copy a passage of text from a web page, right-click and select Save Note; as you can see, the new extension appears to be working as expected. But when you go to add a tag to the saved note (say, "politics"), that feature doesn't work. Time for some debugging, as it's known in the programming trade.

I want you to help me build a Google Chrome extension that captures research notes when I'm browsing the web. When I highlight text on a web page, I should be able to right-click and be able to choose to "save note" from a simple context menu. The extension should save the highlighted text along with the URL and page title to local storage. Basic tagging functionality should also be included.

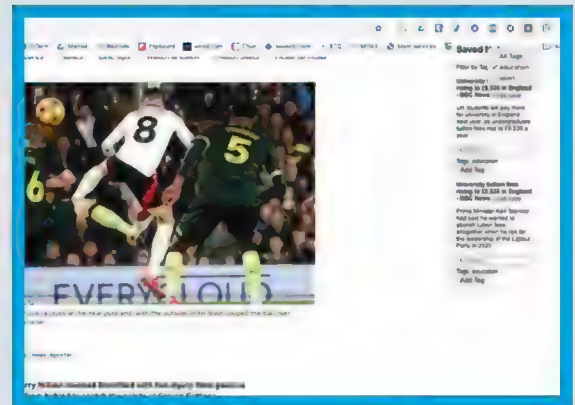
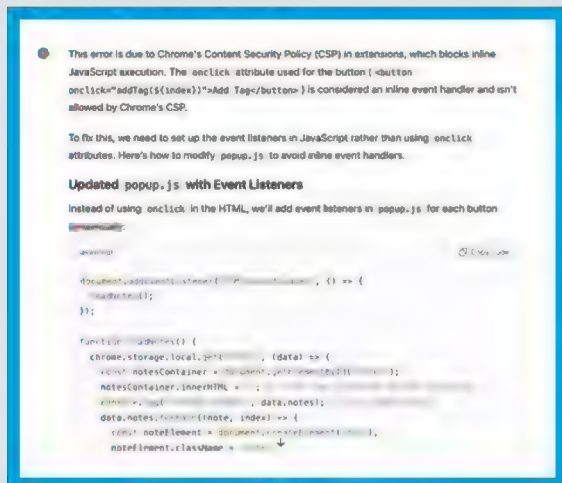
Here's a step-by-step outline for building a basic Chrome extension that saves highlighted text, along with the URL, and page title, and allows basic tagging functionality:

1. Folder and Files Setup

- Create a folder for your extension project (e.g., ResearchNotes).
- Inside the folder, create these files:
 - manifest.json: the extension's configuration file.
 - background.js: handles context menu events.

Fix errors

After a bit of trial and error, it turns out that the tagging function doesn't work because it breaks one of Chrome's security policies. We actually discovered this in the end from an alert in Chrome's extensions settings menu. We fed the error message to ChatGPT, and it coded a workaround to make the tagging work as intended. The lesson here is don't rely on the AI to solve everything. The browser or your code editor will often highlight errors that you can feed back to ChatGPT to resolve problems.

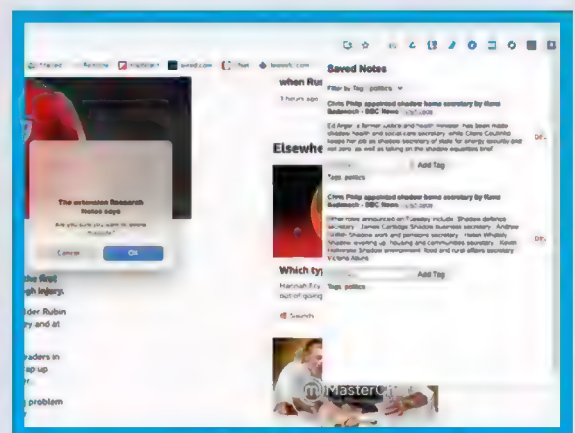
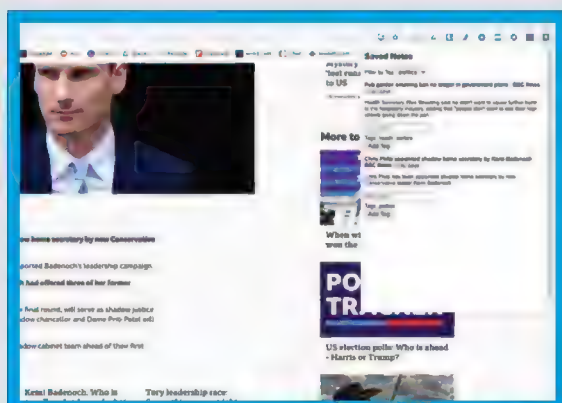


4 Add features


Now that the basic functions are working properly, you can start to add features. For example, it would be great if we could filter our saved notes by tags. So we ask ChatGPT: "Is there a way to filter saved notes by tags so that, for example, I only see saved notes for a tag I select from a dropdown menu?" ChatGPT sets about amending the code. We copy that to our code editor, replace the existing code, reinstall the extension and test again. Remember, every time you make a code change, you need to reinstall the extension and test afresh. Don't add multiple features before testing, as things can easily break and you need to know which change triggered the crash.

Tweak the interface

As you can see from the screenshot in step 4, we've only saved a couple of notes and we're already running out of screen space. We ask ChatGPT if we can make the pop-up window bigger, so that we can see more notes without having to scroll when we access our saved notes. It reveals how to adjust the code to change the size of the pop-up window – and, armed with this information, we can change it to whatever size we like. By showing the code we need to amend, it isn't doing the work for us, but teaching us how to make such tweaks in future using CSS.



6 Keep iterating

Now you can keep adding features or tweaking the design until your extension does everything you want it to. Here, for example, we've created a "DEL" link to the right of each saved note, so we can remove it from storage when we're done with it. We asked for that DEL button to have a pop-up window confirming we want to delete the note, so as to avoid accidental clicks. Keep building out the extension, one feature at a time, testing each one in turn, until you have yourself a fully fledged extension! 

Design a web word game

How you can create a Wordle rival with ChatGPT

→ Some of the best games are exceedingly simple. The wonderful Wordle, for example, is an easy-to-grasp game that hooked tens of millions of players around the world and was eventually bought by the *New York Times*!

If you're sitting on a great idea for a game, but don't have the coding skills to make it yourself, ChatGPT can bring your idea to life – as we'll show in this tutorial.

Below, you'll discover how we created a cricket-based word game called Howzat! without writing a single line of code ourselves. Instead, we patiently iterated the code with ChatGPT's Canvas feature, where you tell the AI what you want altered, and it makes the relevant changes to the code on the screen before you.

To do this, you'll need a code editor, such as the free Visual Studio Code. Create a folder somewhere on your computer called "cricket game", or whatever you choose. Copy the code generated by the AI, and paste it into a new HTML file in the code editor, and save it in the folder you created. Then, whenever the AI changes the code, copy and paste it over the existing code, and save afresh.

To view your web game in progress, you simply double-click on the HTML file you've saved and it will open in your web browser. You'll need to hit the refresh button in the browser every time you save



a change to the code. Note that it's really important to view and test the game each time you make a change, so that if something is not quite right, you can ask the AI to fix it. If you make several changes at once and something breaks, you won't know what caused it to break and it will be much harder to fix.

As mentioned at the start of this page, we're creating a cricket-themed game, but of course you can devise your own game. We're simply showing you the principles of game design here and how you can refine the original code to get a polished game that will have players addicted!

Guess the England Test Cricketer

Enter a letter:

Remaining Wickets: 10

1 Generate starter code

To get us underway, we give the AI the basic gist of our cricket word game, having first selected the Canvas model from the dropdown menu. "I want to create a word game website. The premise of the game is as follows: the player has to guess the name of a player who has played test cricket for England. The player is shown blanks (in a similar style to Wheel of Fortune) for the cricket player's first and second names. They must guess one letter at a time. The player gets 10 attempts (or wickets). If they guess a letter not in the player's name, they lose a wicket. Do you understand?" The AI confirms the basic rules of the game and then sets about writing the code. As you can see, at this stage it's very basic.

2 Separate the names

As you can see from the screenshot in step 1, the game is currently bodging together the first and surnames of the players. We want to separate them, so the player can clearly see how many letters are in both names. We ask ChatGPT to add more space between the names, and although it does so, we eventually decide it will look better and be clearer if the first and second names are on separate lines. So, we ask the AI to make the change; now it's looking much clearer.

Guess the England Test Cricketer

B _ _
S T _ _ _ S

Enter a letter:

Remaining Wickets: 10

Guess the England Test Cricketer

A A A R

Enter a letter:

Remaining Wickets: 9

3 Create letter boxes

Instead of using hangman-style underscores to denote missing letters, we want to use boxes. "Can we replace the dashes with boxes where the player's name is shown?" is the prompt we put into ChatGPT, and sure enough it makes the necessary changes to the code. However, it reverts to putting all the boxes on one line with no gap between names, so once again we have to ask it to put them on different lines. This is an example of how you'll sometimes need to show patience with the AI when iterating a design. But as we can see, the boxes still aren't perfect...

4 Adjust the boxes

As you can see in the screenshot for step 3, the letters are crashing into the edges of the boxes, which looks ugly. So we ask the AI to "keep the letters at that size, but increase the size of the boxes". It does so, and we test the code again, but now the letters seem to be drifting to one side of the box. We ask ChatGPT to centre the lettering in the boxes; it takes us a few attempts until we eventually get a result that while not perfect, it's one we can live with.

Guess the England Test Cricketer

I

B E L L

Enter a letter:

Remaining Wickets: 9

Guess the England Test Cricketer

J E

Remaining Wickets: 9

F G H I K L M N O P Q R

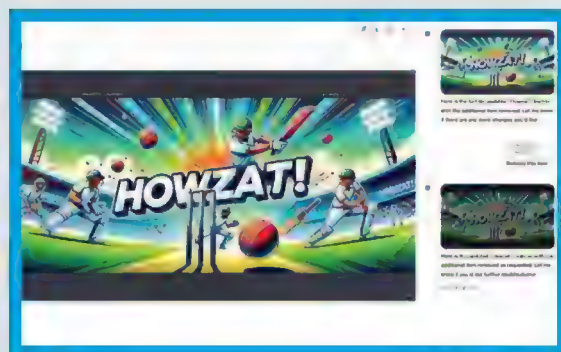
X Y Z

5 Add a keyboard

Currently, our game requires players to type letters into a box, but that isn't an optimal user experience, especially on mobile devices, so we ask: "Instead of typing each letter into a text box, can we create a virtual keyboard that players can click to guess a letter?". The AI sets about the job, but when we test the keyboard, nothing appears to happen, so we describe the problem to the AI and it fixes it. It automatically adds a grey highlight to the letter boxes to show when a letter has already been used – a good example of the AI sometimes taking the initiative. ➡

6 Work on the design

Currently our word game looks hideously boring, like a glorified Word document. Time to start working on the design. We ask the AI to make the background green, like a cricket field, and to “add other visual flair”. It tells us it’s “added a cricket field-like green background, golden elements to highlight important parts of the page, and other visual enhancements to make the page more attractive.” It’s still very much a work-in-progress, but it’s immediately looking better.

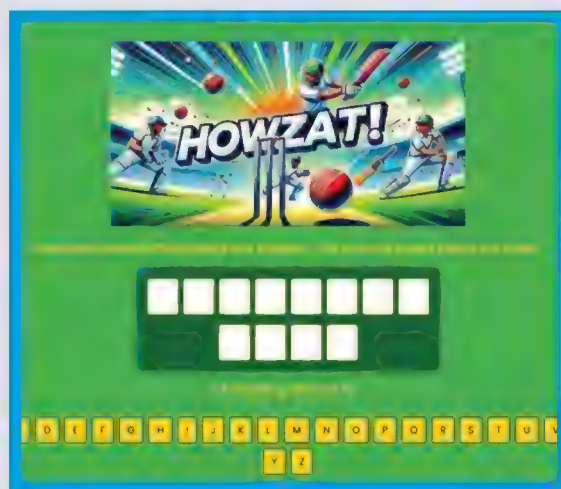


7 Generate a title graphic

Let’s face it, “Guess The England Test Cricketer” is not the most catchy name in the world, and we want to add some visual punch to the top of the screen, so we ask ChatGPT to generate a graphical title banner. “Create a web banner graphic for a cricket game called Howzat!” is all the instruction we give it, and it comes back with a decent effort. As is often the case with AI graphics, there are some weird elements and objects, but we use ChatGPT’s built-in editing tool to highlight them and ask the AI to remove them, until we get something we’re happy with. (We’ll crop out the misspelling on the left!)

8 Add the banner

We ask the AI to add our banner to the website, and it creates a placeholder link for the image and provides instructions on where to place the graphic file in our folder. So, for the first time, and with the AI’s help, we have to manually edit the code, replacing the image link with our own. Eventually, we tell the AI the name of our image link (ie. howzat.jpeg) so that it can keep generating code with the correct image in place. Originally, the image is too large, but we ask the AI to reduce its size by 50% and it works.

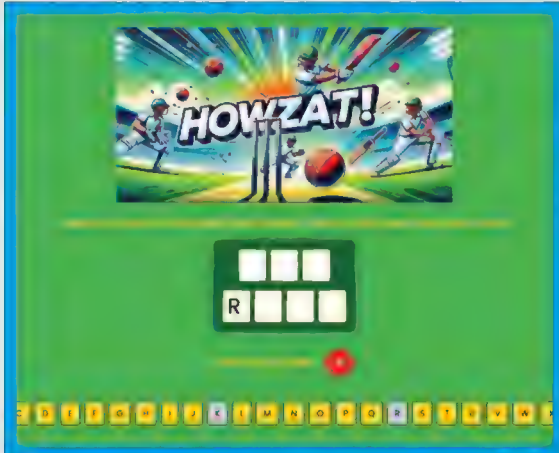


9 Add instructions

The game is fairly simple, but we should probably add a line of instruction for new players to the game. We tell ChatGPT that we want to: “put a line explaining how to play the game beneath the Howzat graphic. It should read: ‘Guess the name of the England test cricketer. You can only guess wrong ten times!’” Furthermore, we tell it to “put this in the same font and size as the ‘remaining wickets’ text.” This helps to keep the design looking consistent and prevents the page from turning into a jumble of different fonts.

10 Tweak the counter

Our remaining wickets counter is very bland. We want to give it more impact and reinforce the cricket theme. So we ask: "For the remaining wickets number, can we put that in a red circle with white text, to make it look more like a cricket ball?" ChatGPT does this, but something has gone wrong. The number of remaining wickets has been replaced by a \$ sign. We tell the AI the issue and it sorts it out. This highlights the importance of making sure you test every small change, so that you don't discover problems later and find it difficult to determine when the error was introduced.



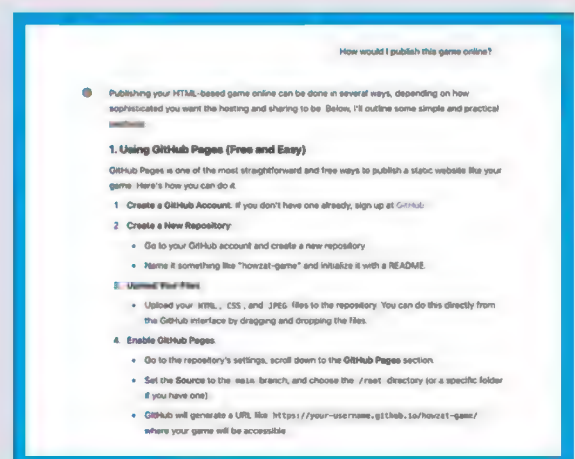
12 Build the cricketer database

By looking at the code, we can see the AI added five sample cricketers to our game, but that obviously won't be enough. So we ask the AI: "I want to add more cricketer names to the game. What's the best way of getting you a list of names to add?" It asks for the names in a comma-separated list, so – in a separate chat – we ask ChatGPT to generate a list of 50 cricketers who have played tests for England since 1980. It generates 50 names (which we check, of course) and then we ask it to put them into a comma-separated list. We then go back to our game development chat and ask ChatGPT to add them to the code. Bingo.



11 Winning/losing messages

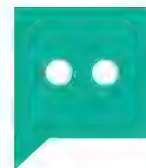
When the player wins or loses the game, we want to create a custom message for them. We tell ChatGPT: "When the player wins a game, I want you to display text stating 'Well done! You found [player's name] with [x] number of wickets remaining.' [player's name] should be the name of the player found. [x] should be the number of wickets remaining." The AI follows our instructions to the letter, and now displays the relevant message when the game is over. We could probably add more visual impact to this message and increase its size. Maybe even replace the letters board with the winning/losing messages.



13 Publish online

And that's it. There's lots more we could tweak with this game. For starters, we should add a "new batter" button, or some such, so that players can start a new game after they've won/lost. But we have enough for now to put it online, get some feedback from testers, and make changes later. We ask ChatGPT how we can publish the game online, and it gives us a variety of options, including uploading our code to GitHub (a coder's website with a strange name!), which will host our web game for free – this is perfect for testing, until we're ready to launch it on a website of our own! ChatGPT can help walk you through that, too...





Create pro-grade images and video

ChatGPT can be of great help for both creating and improving pictures and video. In this section, we offer advice on how to ensure your requests hit the mark and the AI delivers exactly what you want.

72 10 tips for great image prompts

75 ChatGPT's next-gen video

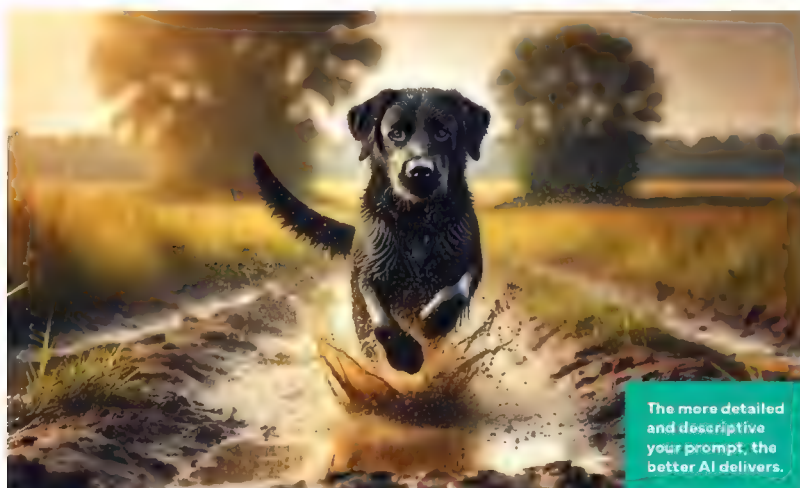
76 Master your camera controls

78 Video editing tips

80 Photo editing masterclass **TUTORIAL**

10 tips for great image prompts

Create stunning AI images with our prompting tips



The more detailed and descriptive your prompt, the better AI delivers.

1 Be specific

Don't be afraid to detail exactly what you want – at length, if necessary. Describe the objects you want in an image, the shape you want the image to be in (widescreen, portrait, for example), what the background should look like, the lighting and so on. You might not get everything you want, but the more information you provide, the more likely you'll get a decent result.

For example, we asked:

Create an image of a black Labrador dog running through a muddy puddle. The dog's fur is wet. The dog is running towards the camera, and the camera is placed at ground level. The background should be fields and trees, and the picture is taken at sunset, with soft, warm lighting. The picture should have a landscape (4:3) aspect ratio.

You can see that the image generated included everything we requested.

2 Keep iterating

If the initial image generated doesn't quite hit the mark, keep iterating. You can ask for changes in the same thread, and ChatGPT will normally follow your instructions. Don't want text in the image or want a pencil drawing instead of a cartoon-like illustration? Just ask.

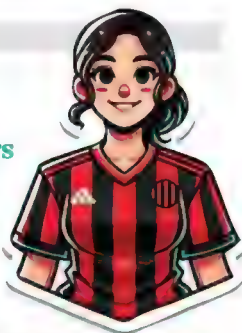
3 Stickers and emoji

Something that AI is particularly strong at is creating stickers that can be used as emoji in mobile apps.

For example, we asked:

Create an image of a girl wearing a red and black striped soccer kit. Vector illustration, sticker art.

We were given the image shown. Those images are easy to cut out (long press on the image in an iPhone's Photos app, for instance) and use in a variety of apps.



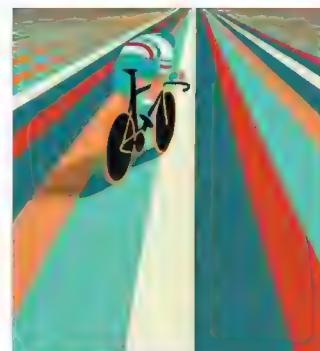
4 Provide visual inspiration

Sometimes it's hard to describe the visual style you're looking for. If you have in mind a style of image you want the AI to adopt, you can upload it and ask the AI to use that as inspiration.

Here, for example, we upload the image of the car on a striped surface and ask:

Draw an image of a racing cyclist on a striped surface, in the same style as the attached image.

The result isn't perfect; the lines have gone a bit skew-whiff in the distance. With refinement, though, we could get the image desired.





If you have in mind a style of image you want, upload an example and ask the AI to use it for inspiration

5 Draw what you want

The visual inspiration for a prompt doesn't need to come from a photo or image you've found online. You can do a rough sketch (and we do mean rough) to give the AI a sense of what you're hoping to achieve.

We knocked up this terrible drawing in seconds, then asked the AI to:

Create a picture based on the drawing you see here of a knight on horseback, at the bottom of a hill that has a castle on top. Make the image look like a colour illustration.



Quite the opposite of our simple drawing, the resulting image is pretty impressive.

6 Use other people's prompts

There's no copyright on prompts. And people will often share their prompts in online forums so people can get similar results (even entering the exact same prompt as someone else will generate a different image). The prompt below was shared on an online forum:

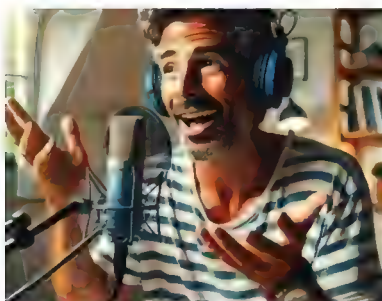
Widescreen 1792 x 1024 image. Whimsical best heart-warming lovable computer-animation style. A very cute older woman, in her 70s, slightly overweight, exhausted, snoring, sleeps on a vintage couch, as does her extremely huge messy haired orange tabby cat. The cat is at least 3x the size of the woman. There is a resemblance between the woman and her cat. The setting is a cosy living room. An older vintage TV can be seen in the background. There are many, many books. The lighting on the two characters is cool; the rest of the room has warmer lighting.

Its result is the image above! Remember, you can always adjust the prompt (ie. cat instead of a dog), if you wish. 🐾

7 Mimic famous artists

ChatGPT is a pretty good impressionist. If you ask it to ape the style of a famous artist, it will normally take a reasonable stab at it. It may refuse to mimic living artists for copyright reasons, but the long dead are fair game. How about a pint of beer in the style of everyone's favourite ear mangler?

.....
Create a painting of a pint of beer in the style of Vincent Van Gogh.
.....



8 Edit images in ChatGPT

Often AI-generated images aren't perfect. AI still struggles with hands, for example, as you can see in the original image here. However, ChatGPT now has a built-in editing tool for images, which you can access by clicking on a generated image and then selecting the icon that looks like a paint brush with a circle.

Draw around the part of the image you want to change and then tell the AI how you want it edited. Here, we said:

.....
Hand seems distorted. Try again.
.....

At the second time of asking, the left hand of our podcaster looks far more natural and the image becomes usable.



Ask AI to apply Van Gogh's energy and colour to a subject of your choice.

9 Prototype products

The AI can help you think about ideas for the style of new products. For example, the following prompt generated the image of the lamp you see here:

.....
Create an image of a stylish desktop lamp. The lamp is light blue and switched on. Studio photography. Yellow background.
.....

You can keep asking the AI to try again to generate different designs, which might give you the germ of an idea for an original design of your own.



10 Think different

This is AI. Let your imagination have no bounds. It might not pull off everything you ask for, but this is an opportunity to try stuff you can't do elsewhere. A motorbike rally made out of felt, for instance, or a stained-glass window depicting a toaster. Free your mind and go for it! 🍷

ChatGPT's next-gen video

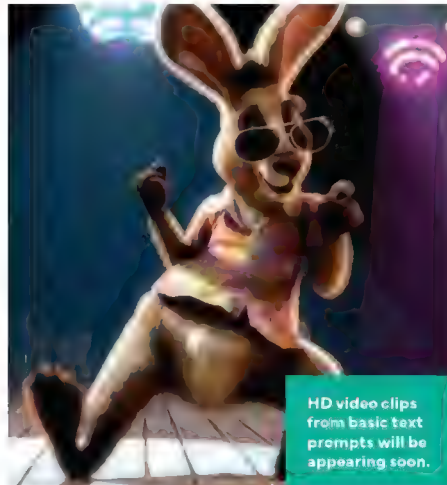
Sora promises to deliver video clips from your text prompts



yping a few words and watching ChatGPT turn that into an image within a few seconds

is still faintly akin to magic. However, the next big thing for ChatGPT is doing that with video.

Codenamed Sora, OpenAI has teased text-to-video capability for many months at the time of writing, and it promises to be a huge deal.



THE VIDEO BARRIERS

There are huge challenges with asking AI to create video from text prompts. The biggest issue is that it takes an enormous amount of computing power to produce even a short 10-second clip. The current DALL·E photo model takes around 10-15 seconds to generate a single, relatively low-resolution still image. With video needing at the very least 30 frames per second to look smooth, you only need to do your sums to consider how long it will take to generate high-resolution video (although it isn't quite the case of generating each frame afresh with video).

Video generation will also put massive demand on OpenAI's cloud computing servers. ChatGPT already consumes a phenomenal amount of computing power – AI firms are talking about building their own nuclear reactors just to keep pace with demand. That means it's unlikely to be offered for free, and may even cost more to access than the current \$20 per month GPT Chat Plus subscription.

WHAT IS SORA?

Sora will turn your simple text prompts into high-definition video clips. The prompts don't have to be full-blown video scripts. Even relatively short prompts such as...



A Samoyed and a Golden Retriever dog are playfully romping through a futuristic neon city at night. The neon lights emitted from the nearby buildings glisten off their fur.

...result in a video clip lasting almost ten seconds, according to the Sora demonstration site (<https://openai.com/index/sora>).


As is the case with images, Sora will allow filmmakers to construct an enormous range of scenes, including wild fantasy – such as a clip of two pirate ships battling each other inside a cup of coffee, or woolly mammoths pounding through a mountainous landscape – that would today require thunderously expensive CGI.



VIDEO RIVALS

OpenAI isn't the only company working on this. Indeed, rivals already have launched services that you can access today.

Among the most highly rated of these is Runway (runwayml.com), which you can use for free to generate clips of up to 10 seconds long. However, note that free customers are routinely blocked from accessing the service if demand on the servers is high, with preference given to paying customers (from \$12 per month).

We'll cover GPTs that work with text-to-video services later (see p120), although these are much less ambitious than what Sora promises. 

Master your camera controls

Take better photos with your camera or smartphone

There's a myth that today's cameras do everything for you. Sure, it's possible to get a well-focused, decently exposed image if you take a shot in automatic settings, but for photos that really stand out you need to be familiar with the more advanced settings.

ChatGPT is a great companion here, especially when you're out shooting. You can fish the phone out of your pocket and ask the AI tips on how to take a stunning portrait or what different buttons do, and get an instant answer relevant to your particular model.

Of course, we more often take photos on smartphones than full-blown cameras these days, and ChatGPT can help with advice here too, particularly when it comes to accessing advanced settings.

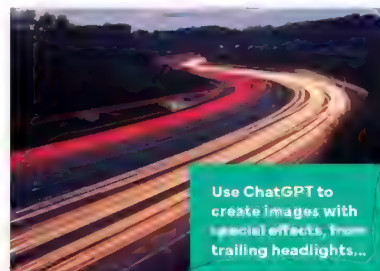
TECHNIQUE ADVICE

When you're getting to grips with camera controls, it's often the case that you have a particular photographic style in mind, but don't know how to pull it off with your camera. ChatGPT can provide guidance if you describe the end result you're looking for:

I want to blur the background of portraits when shooting with my Canon DSLR camera. How do I do this?

I want to achieve the effect where car headlights trail across an image shot at night. How do I achieve this with my Nikon DSLR?

Be sure to state the make of your camera, since button labels differ from one manufacturer to the next. For example, the aperture priority mode that ChatGPT suggests we use for blurred portrait backgrounds is labelled "Av" on Canon cameras, but only "A" on a Nikon.



Use ChatGPT to create images with special effects, from trailing headlights...

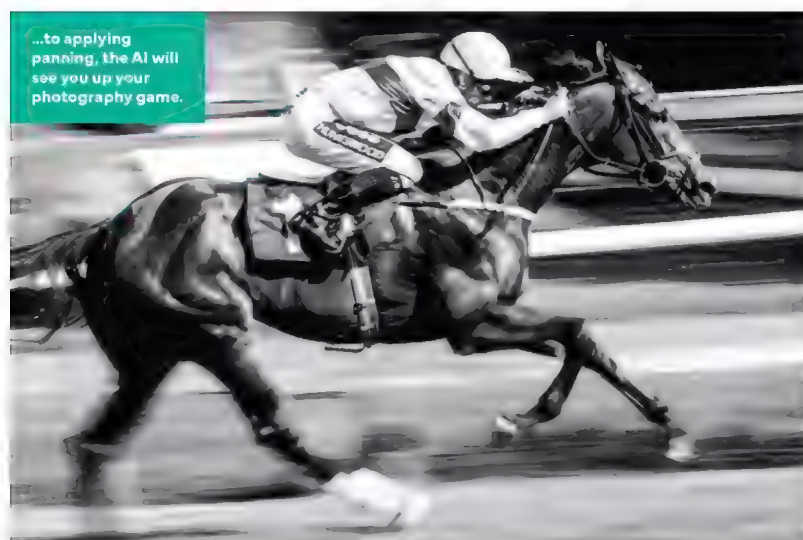
On the second prompt, the AI delivered strong advice on placing the camera in manual mode, using a remote timer to avoid camera shake on long exposure shots such as this, and even advice on lens filters you might use to avoid over-exposing the shot.

UPLOAD PHOTOS YOU WANT TO SHOOT

If you're browsing social media, websites or magazines, and come across a photo that you love, you can ask ChatGPT how to pull off something similar yourself. Either save a copy of the photo (if you've seen it online), or take a snap of it with your phone camera. Upload it to a new ChatGPT conversation using the paperclip icon, and then ask:

I want to shoot a photo like this on my Canon DSLR. How do I do it?

In this case, ChatGPT correctly detected the photo was taken using the panning technique, where you move the camera in the same direction as the subject to keep them in focus while the background is blurred. The AI gives plenty of good advice on the different settings you'll need to achieve a similar style of shot, including reducing the shutter speed and shooting in burst mode to take multiple images of the moving target.



...to applying panning, the AI will see you up your photography game.

LEARN YOUR CAMERA'S BUTTONS

If you've bought yourself a new camera, you've probably spent the first hour with it wondering "what does that button do?". Given DSLRs can have a dozen different buttons on them, not to mention hundreds more settings buried in their menus, it can be difficult for even the pros to remember what all these options offer.

You can ask ChatGPT directly what a button on your camera does:

What does the M-fn button on my Canon EOS R6 Mark II do?

Specifying the precise model for this type of prompt is important, particularly if it's a new camera, as the AI may discover it doesn't have this information in its training data and will go hunting online.

If you really want to maximise your chances of accurate answers for your specific model of camera, it's worth creating a GPT – a custom chatbot dedicated specifically to this task – and uploading your camera's manual to its knowledge base. Most camera manufacturers offer a free PDF download of their product's manual, and instead of ploughing through hundreds of pages every time you want to find a new feature, you can simply ask the GPT.

Creating a GPT is a feature reserved for ChatGPT Plus subscribers only. Find out more about creating your own GPT from p110.



DSLRs can have a dozen buttons on them, not to mention hundreds more buried in menus. Ask ChatGPT directly what a button does

BOOST YOUR PHONE PHOTOGRAPHY

The best camera is the one with you at the time, as the saying goes, and most people actually walk about with a very good camera in their pocket.

Smartphone cameras have advanced so far that they're able to perform many of the advanced shooting techniques that you might previously have reserved for a full-blown DSLR. Some even have full manual settings that allow you to set the aperture, shutter speed, ISO and other settings.

However, finding these settings can be another matter entirely – which is

why asking ChatGPT for help can be a quick win, especially if you have a limited window to get a shot.

For example:

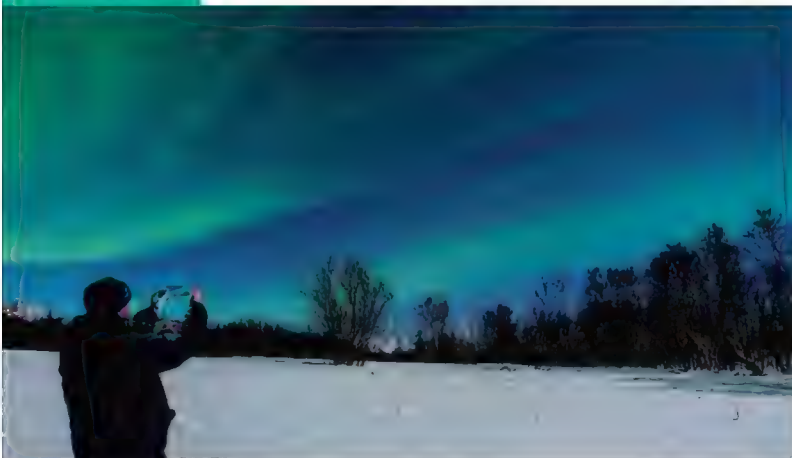
I can see the Northern Lights in the sky. How best to shoot these on my iPhone 15?

How do I take a portrait at sunset using my Pixel 8a?

For the Northern Lights shot, ChatGPT sensibly recommends using the camera's Night mode, shooting in the ProRAW image format to give maximum flexibility when editing the photo; it offers tips on composition, such as including foreground elements such as trees to give the shot more depth, too.

As for the sunset portrait, there's advice on where to position the subject, how to shoot in Portrait mode, and how to adjust focus to ensure the image is sharp and correctly exposed for the person's face. There's a slight misstep in the instructions on how to manually increase brightness, which is a timely reminder to not take everything the AI says as gospel. 🙏

Use the night settings when you want to take that shot of the Northern Lights.



Video editing tips

Need help in the editing suite? The AI's got your back



here are several reasons it takes about three years to make a Hollywood movie, and one of

those is video editing: it's neither a quick nor easy process. While it might be dead simple these days to even shoot high-quality video on smartphones, pulling it together into a tight edit is more complex. This is where AI can help.

Of course, there's AI software available out there that can auto-edit your clips together, but the results are often disappointing. Better to seek AI help on how to shoot, edit and apply special effects yourself, so you retain full control over the finished footage.

AI can even offer advice on how to adapt your footage for the various social media outlets out there. Action!

ADVICE ON SHOOTING

There's nothing you can do in the editing suite if you haven't captured quality footage in the first place, so before you even embark on a video editing project, give thought to how you will shoot it in the first place. ChatGPT can help with advice here:



I'm shooting a promotional video for a new trainers brand. How best to shoot and edit it?

I want to film an interview with two people. What's the best way to film and edit that?

It's interesting to note that on the first prompt, ChatGPT detailed a "workflow to maximize impact with your Canon EOS R6 MKII and Adobe Premiere Pro", because it remembered that we owned that camera and video editing software

from previous conversations, saving us from having to re-enter data.

When it comes to recording our interview for the second prompt, ChatGPT suggests a three-camera setup – one for each of the interviewees and a third camera that's capturing a wide shot of both in the same frame. "This establishes context and can be used as a fallback shot," the AI notes.

We also get advice on lighting, audio equipment and how to frame the cameras on each of the interviewees, as well as shooting tips. "Guide your interviewees to face each other or the interviewer if off-camera. This helps create a natural flow of conversation," ChatGPT suggests.

We even ask ChatGPT if we could shoot the interview using iPhones, and it follows up with advice on how to adjust iPhone video settings, lavalier mics that work with iPhones, and how to put the phones in Airplane mode so shooting isn't disturbed by notification bleeps.

EDITING TECHNIQUES

So, we've got our video in the can, as it were; now what to do with it?

I'm going to use Adobe Premiere Pro for editing. How best to import the footage from each camera?

Here, we get advice on how to transfer the footage from camera/phone to computer, and to create separate folders on our computer for each camera's footage. Then we get clear instructions on how to create a new project in Premiere Pro, how to import the footage, and how to sync it against the audio so that the three different camera angles from our interview are perfectly aligned. ChatGPT then dives into a brief explanation of editing a multi-camera sequence, in which you can cut between shots in real-time using keyboard shortcuts (ie. press 1 for camera 1, 2 for camera 2, and so on).

We ask for further explanation on this, and the AI explains how this editing technique speeds up the editing process by "allowing you to switch between camera angles as if you were directing live". It provides clear step-by-step instructions on how to pull this off in Premiere Pro and advises that you can always go back after the initial pass and refine any cuts that didn't work, or change to a different camera.

Video editing software can be pretty intimidating, but the guidance will definitely ease the path for newcomers. Note that advice will vary for different types of video, but you can of course change the prompt accordingly.



Video editing software can be intimidating, but ChatGPT's advice will definitely ease the path of newcomers

ADAPTING FOR SOCIAL MEDIA

You might want to use your video on different sites and social media outlets. ChatGPT can help you ensure you format and cut the video appropriately for each.

I want to use my edited video on various sites and social media, including YouTube, Facebook and Instagram. What do I need to consider when editing?

TRANSITIONS AND EFFECTS

It's easy to get carried away with video editing software, adding fancy transitions between shots or special effects that end up distracting the viewer's attention away from the content itself. ChatGPT can offer advice on the types of transition that would work well for the type of video you're shooting. Let's return to our filmed interview:

What kinds of transitions or effects would work well for an interview?

Here, ChatGPT suggests using J and L cuts, where you let the audio or video continue over the beginning or end of the next clip. "These cuts work well in interviews, as they allow viewers to see one person's reaction while hearing the other person speak, maintaining the flow of conversation and adding emotional depth," ChatGPT advises.

It also suggests the use of a Ken Burns effect, adding a slight zoom or pan to a static wide shot to simulate movement. "This is especially useful in longer responses, or to add emphasis to a certain point," the AI notes.

In response, we receive advice on which aspect ratios and resolutions work best for each of the sites mentioned, and guidance on reframing our footage for each.

For social media sites, we're correctly advised to focus on short-burst highlights rather than, say, a full interview video that might be better suited to YouTube. On Facebook videos, for example, ChatGPT notes: "Videos auto-play muted, so having an engaging visual hook in the first few seconds, along with burned-in captions, is crucial to hold viewers' attention." 🎥

Photo editing masterclass

Use AI to get exactly the images you're looking for

➔ There's a lot of hype around AI image generation and using it for personal or business use, but it's very rare that the AI generates the perfect image.

The good news is that ChatGPT isn't only capable of generating images; it's able to help you edit them, too. We've explained how ChatGPT's own editing tools work earlier in this section, but they're pretty limited. If you really want full control over an image edit, you'll need dedicated software such as Photoshop.

Photoshop (and equivalents such as GIMP or Affinity Photo) is a feature-packed application, and can be intimidating for newcomers. However, the AI does a brilliant job of not only understanding what you want to achieve in the first place (brilliant if, for example, you don't know the name of the tool that allows you to fade an image from colour to black-and-white), it will also provide step-by-step instructions on how to implement the edit.

As you'll see in the step-by-step tutorial below, ChatGPT isn't perfect. Sometimes, it suggests a menu option that doesn't exist or makes another misstep, but 99% of the time it will



get you close enough to work out how to do what you wish to for yourself.

ChatGPT isn't only handy for helping you to find the features you want, it can also suggest ways to improve your images. As you'll see in our tutorial below, it offered multiple suggestions on how we could use Photoshop to enhance further an image it generated in the first place!

In the tutorial below, we're going

to run through how to generate and edit an image that might be used for a restaurant; but the same techniques could be used for images you're creating for personal or other business use. The tutorial is designed to explore some of the techniques for which AI can offer help, but of course there are hundreds of different features in photo-editing software, so this is by no means an exhaustive exhibition of its capabilities.



1 Create the prompt

We'll start by generating an image of meat cooking on a grill, which we're planning to use for a restaurant promotion. We want the image to be landscape (ie. wider than it is tall) and we want some space to add text above the meat. We enter the prompt: "Generate an image of meat cooking on a grill in a professional kitchen. The image should be landscape format with room to add text above the image of the grill." This is the image we get in return – not a bad start, but it needs refining.



2 Iterate the image

That first image is decent, but we want to see less of the kitchen and more of the grill. So, in the same chat thread, we give the AI some art direction. “Try again. Zoom in closer on the grill.” This produces a much better image, but it isn’t quite right, so we say: “This picture is closer to what I want but try again.” This time we get an image we can work with; while it’s a long way from perfect, we can edit it into shape.

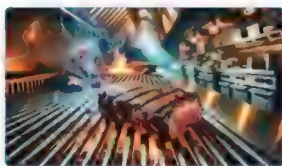


3 Upscale the image

As we’ve discussed previously, one of the big limitations of the images generated by ChatGPT’s DALL·E is that they are relatively low resolution. This means that if you plan to use them in print, you’ll only be able to do so at a smallish size, before they start to blur. One way around this is to use upscaling software, so we ask ChatGPT: “Give me advice on how to upscale images created by DALL·E.” It offers a range of suggestions, including the dedicated upscaling tool Topaz Gigapixel AI. We use this to double the resolution of the image.

4 Ask for editing suggestions

Not sure where to go next with your image? Well, you can always ask the AI for advice. We put our upscaled image back into ChatGPT and ask: “Suggest ways in which I should edit this image”. Truth be told, not everything we receive in return is great, but there’s some good advice on enhancing colours or even adding a subtle vignette effect (darkening the corners of the image) to draw the viewer’s eye towards the meat on the grill. We’ll come back to these later.



Suggest ways in which I should edit this image

This is a striking image that already highlights the texture and ambiance of a professional kitchen grill. Here are some ideas to enhance its appeal:

1. **Increase Contrast and Clarity:** Enhance contrast and clarity to bring out the juicy texture of the meat and make the grill marks more prominent. This will add a more dramatic effect to the image.
2. **Adjust White Balance and Warmth:** Consider adjusting the white balance to add a bit of warmth. This will enhance the glowing, inviting feel of the flames and make the scene feel cozier.



5 Crop the image

The first edit we want to do is crop the image, to take out some of those distorted grill bars on the left of the original image. We’ll be using Photoshop, but you can use any well-known photo editing software. We ask “How do I crop an image in Photoshop?”. It’s quite a basic feature, but ChatGPT does a solid job of explaining more advanced cropping tools, such as the image straightener and how to make a non-destructive crop, so if you want to revert the crop later, you can. ➔

6 Remove unwanted objects

Photoshop is superb for removing unwanted objects in images, and there's certainly a few things in our image we want to get shot of: the weird berry-like thing to the left of the meat; the other objects on the grill; and maybe some of that distracting flame in the background. We ask ChatGPT: "How do I use Photoshop 2025 to remove an item from an image?" It gives us four different techniques for removing objects; between them, we're able to clean up the image nicely.



7 Tweak the colours

One of ChatGPT's earlier suggestions was to tweak the colours in our image and boost the saturation of the reds/oranges in the image "to make the meat look even more appetizing". Nice suggestion, but how do we do that? "How do I boost colour saturation for reds and oranges?" we ask, and it replies with step-by-step instructions on how to add an adjustment layer and increase the saturation of the reds. The instructions falter slightly when it comes to targeting oranges, since that colour isn't in the Photoshop presets, as ChatGPT suggests; but when we point this out, it offers a decent workaround.

8 Apply a gradient

The colours are looking pretty good now, and now we want to apply a gradient so that the bottom of the image where the meat sits retains its rich, saturated colour, and the top of the image is black-and-white, so that when we add text it stands out. "I want to apply a gradient so the bottom of the image remains in colour and it fades upwards to black-and-white," we tell ChatGPT. "Can I do this?" Yes, indeed we can, and the AI gives us a step-by-step guide on how to do it, including instructions on how to fine-tune the effect.



9 Add text

The time has come to add text, in this case the name of our restaurant. "I want to add text to the top of my image in the black-and-white area. How do I do this?" Here, ChatGPT details how to find the text tool with a keyboard shortcut; how to change the font, size and colour of the text; and even how to add effects such as the stroke (or outline) and drop shadow to make the text stand apart from the image beneath.

10 Bend the text

The text looks good, but we want it to curve over the steak and it isn't obvious how we can achieve this. "How do I bend the text so that it looks like it's sat on a curve?" is our rather non-technical explanation, but ChatGPT knows what we mean. It offers two options, each of which is detailed with step-by-step instructions on how to achieve the effect. We opt for the warp text option, which bends the text in an arc over the steak. The AI provides further instruction on how to fine-tune the effect.



11 Vignette effect

Remember earlier that the AI suggested adding a vignette effect to draw the eye towards the meat? Let's do that as a final touch. "How can I add a vignette effect to my image?" In response we get a range of options. We decide to go with the suggestion of creating a gradient layer. Again, the instructions are a little wayward, but after a little trial and error in the menus, we work it out. Even if ChatGPT doesn't always offer up precisely the right instructions, it gets you close enough to be able to feel your way around.

12 Finishing touches

OK, we're done editing the image. But how do we get it from Photoshop, with all these different layers open, into a format we can, say, put on our website? "I've finished editing my image in Photoshop. What should I do now?" Even with a prompt as unspecific as that, ChatGPT delivers full instructions on how to save the file in Photoshop in case we want to come back and fiddle with it later, as well as providing direction on how to flatten the image (ie. blend the layers into one) and export the image in different formats, such as a JPEG that you might use on the web.

I've finished editing my image in Photoshop. What should I do now?

Great! Once you've finished editing your image in Photoshop, here's a step-by-step guide on what to do next to save and export your work properly:

1. Save Your Work in PSD Format

- **Why:** Saving in PSD format (Photoshop Document) keeps all your layers, masks, and adjustments intact, so you can come back and make changes later if needed.
- **How:** Go to **File > Save As...**, choose **PSD** as the format, and select a location on your computer to save it.
- **Tip:** Name your file descriptively (e.g., "Grilled_Steak_Final.psd") so you can easily recognize it later.

What's the best way to save this image if I wanted to use it on Facebook?

For saving an image to post on Facebook, it's best to optimize the file for the platform to ensure the highest quality with fast loading. Here's how to do it in Photoshop:


1. Resize the image for Facebook

- **Recommended Dimensions:** Facebook suggests images be at 1200 x 630 pixels for landscape orientation, or 1080 x 1080 pixels for a square image. Adjust based on your image's orientation.
- **How to Resize:** Go to **Image > Image Size...**, enter the desired width and height (make sure "Resample" is checked), and click OK.

2. Export as JPEG

- **Format:** JPEG is ideal for Facebook because it offers good quality with a relatively small file size.

13 Sharing advice

You might want to share your image in a variety of places, such as on a website, on the various social media sites or even in print. You can ask ChatGPT for advice on specific locations, such as "What's the best way to save this image if I wanted to use it on Facebook?" Bear in mind that some social media sites prefer portrait images, so if you have a specific target in mind from the start, it might be worth making that clear before you create the image in the first place. 





Supercharge your hobbies

No matter how you like to spend your spare time, AI can up your enjoyment. So whether you're a budding author, interested in artists past and present, or looking to boost your fitness, ChatGPT will take you to the next level.

86 **Creative writing and storytelling**

88 **Design a board game** **TUTORIAL**

90 **Painting and drawing**

91 **Learn about famous art**

92 **A personalised exercise plan**

94 **Build your family tree** **TUTORIAL**

Creative writing and storytelling

Sharpen your fiction writing with AI assistance



Whether it's pure escapism or something a little more serious, many people get a kick out of writing fiction. But when writer's block strikes, it's yourself you'll be kicking.

ChatGPT can help unclog the creative process, helping you to generate ideas for stories or flesh out characters. Likewise, if you haven't got time to visit the French vineyards for your romantic novel about a summer in Provence, you can ask the AI to help you fill in that evocative background detail.

And although we strongly discourage you from letting AI write chunks of your story, it can be a useful tool for finding an allusive turn of phrase. Let's explore how ChatGPT can be a valuable writing partner.

IDEA GENERATION

Sometimes, you have the bare bones of an idea for a story, but it needs developing. Instead of gawping at a blank page, trying to force the words out by sheer willpower, why not throw your idea at ChatGPT and see if it sparks something?

Now, let's be clear. If you're relying on AI to generate the entire plot of a story, you can fully expect to join the thousands of other authors on Amazon who have more fingers than sold copies of their book. But the AI might just give you the genesis of an idea that spurs your creativity. For example:



I'd like to write a story about a city trader who has moved to rural Wales to start a new life as a farmer. Give me some plot ideas.

Ideas generated by the AI include a disaster plot twist, where "just as the

protagonist is starting to get the hang of farm life, a crisis strikes – perhaps a bad season, disease in the livestock, or a natural disaster like flooding, common in Wales”.

To be honest, most of the ideas that ChatGPT presented were fairly obvious or plodding, so we asked the AI to spice it up a bit with a follow-up prompt, asking for more outlandish ideas.

Aside from the predictable alien invasion and time-travel nonsense, ChatGPT suggested a plot where it's discovered that anything grown on the farm has incredible healing powers. “The trader, upon learning the farm's true power, is faced with moral dilemmas: should they commercialise the land's powers, hide its secret, or share it with the world? Conflict arises when powerful entities, both corporate and governmental, catch wind of the farm's potential.” Now you're talking.



If you're an author in waiting, ChatGPT can help you get started.

CHARACTER DEVELOPMENT

Fleshing out characters can be a tricky task, particularly secondary characters who aren't one of the main protagonists. The AI can help with this job, particularly when it comes to placing a character in a setting. For example:

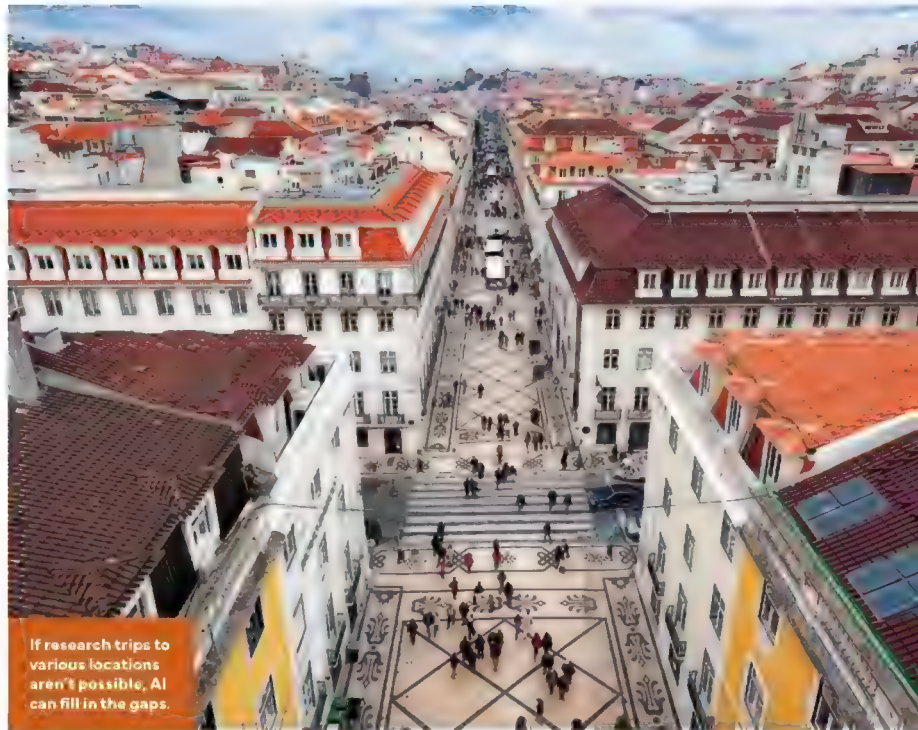
I'm writing a fantasy novel set in the year 2090, where Earth is under attack from human-like invaders from an unknown planet. I want to create a British female child character who has been orphaned in the conflict. Create the character for me, including background detail.

ChatGPT invents a 12-year-old girl called Eliza Foster from Manchester. The AI creates a backstory for her parents: her mother was a nurse killed tending the injured on the front lines, while her father and brother were killed during an air raid on their neighbourhood.

The AI gives details of the girl's appearance, her personality, and even suggests a sub-plot where she finds companionship with a stray dog called Rusty. Some of the detail is clichéd and unimaginative, but it at least gives you a starting point.

A word of warning: do Google the suggested character, as we've seen the AI dredge up some that are very close to those used in published books – you don't want to be accused of plagiarism.

Fleshing out secondary characters in a story can be a tricky task; the AI can help place a character in a setting



BACKGROUND RESEARCH

It's all well and good for Stephen King or Val McDermid to spend weeks on location researching a new book, but not everyone has that time nor their resources. If you need help with background research for a writing project, ChatGPT stands ready to assist.

I'm writing a story set in Lisbon. Describe some real-life art museums that my character can visit in the city.

I'm writing a book set in the times of the bubonic plague. Describe plague symptoms for me.

The request for Lisbon museums results in detailed descriptions of seven different venues, including the Museu Berardo, which features a "vast range of modern art" from artists such as Picasso and Warhol, and has a "sleek, modern feel, with minimalist white walls and spacious galleries". You can, of course, back this up with internet searches.

Meanwhile, the bubonic plague doesn't sound like a bundle of laughs, resulting in egg-sized lumps (or buboes) around the lymph nodes that "begin to suppurate, meaning they fill with pus and can burst, releasing foul-smelling fluid". Enjoy your lunch.

SIMILES AND METAPHORS

Often when writing, you can find yourself grappling hopelessly for a simile or metaphor. ChatGPT can help you fill in the blanks. Let's take our horrific bubonic plague example:

Give me a simile for the pain of the buboes caused by the bubonic plague?

After a couple of iterations, ChatGPT settled on: "The buboes swelled beneath the skin like overripe plums, their dark, bruised surfaces taut and ready to split, throbbing with a pain that pulsed with every heartbeat." Honestly, just forget about eating for a bit.

What about when you need a metaphor to describe something?

Give me a metaphor for the sense of losing your memory.

Again, after a couple of "try agains", we quite liked: "Her memories were like pages torn from a book by a relentless wind, each one whisked away before she could grasp it, leaving behind only fragments of a once complete story". It isn't Shakespeare, but it could be adapted into something usable. ☺

Design a board game

Create a new game with your AI design partner

→ If you enjoy passing time with a good old-fashioned board game, you may have a secret urge to design one yourself. Well, with AI assistance, you can do just that.

All you really need to get going is a rough idea of the game you want to create. ChatGPT can help you work through the rules, the game mechanics and the board design. It doesn't have the capability to design the board for you, but it can give you everything you need to brief a designer or do it yourself.

This process is much more of a conversation with the AI than the question/answer format that discussions with ChatGPT often take. And to get the ball rolling, below is the concept for the board game that we're going to develop.

We want to create a board game about mountain biking. It's a game for up to four players, from ages 10 to adult. The basic concept is that riders have to get from the top of the mountain to the bottom, but they can choose to take different routes on the board. The shorter routes contain more risk, so players have to weigh up whether to go for speed and risk crashing, or take the safer, longer routes down the mountain. The paths cross at various points so players can change routes midway through the game.

Now let's get on with designing the game!

1 Explain the concept

To start, explain the concept of the game to the AI. To do this, we literally pasted the concept description on the left into a ChatGPT prompt and finished by asking "Do you understand?". If your ChatGPT settings are set to allow the AI to remember parts of your conversations, you might see the "memory updated" flag, and then ChatGPT should give you a summary of its understanding of the game, so you can check it has grasped the idea before moving on. Keep all conversation about the game in this same thread.

I want to create a board game about mountain biking. It's a game for up to four players, from ages 10 to adult. The basic concept is that riders have to get from the top of the mountain to the bottom, but they can choose to take different routes on the board. The shorter routes contain more risk, so players have to weigh up whether to go for speed and risk crashing or take the safer, longer routes down the mountain. The paths cross at various points so players can change routes midway through the game. Do you understand so far?

Yes, I understand the concept! The game revolves around players navigating a mountain, deciding between shorter, riskier routes and longer, safer ones, with the option to switch paths at intersections. The mechanics of weighing risk versus reward and the opportunity to adjust strategies as the game progresses sound engaging. What kind of details or mechanics would you like help with next?

I want it to be a card-based game, where players start with a hand of cards that move them a varying number of moves along their chosen path. There needs to be a mechanic where players who choose to travel on the riskier paths have to add a "danger" card to their hand, that may cause them to fall from their bike and miss a turn.

That sounds like a great mechanic to add tension and excitement! Here's how you could implement it:

- 1. Movement Cards:** Each player starts with a hand of movement cards. These cards will have different values representing how many spaces they can move along their chosen path. For example, a card might move the player 1, 2, or 3 spaces.
- 2. Danger Cards:** Every time a player takes a riskier path, they must draw a "danger" card. These cards could be shuffled into their hand, and they have to play them like any other card. The danger card might say something like:
 - "Crash! Miss a turn."
 - "Lose balance, move half the spaces on your next card."
 - "Smooth ride, no effect." (Some danger cards will have no negative impact to keep the element of surprise.)

2 Develop the idea

So, we've got the germ of an idea; now to develop it further. We tell ChatGPT we think it should be a card-based game, and that there needs to be a mechanic where players can choose to travel along shorter, riskier paths, but must add "danger" cards to their hand that may cause them to fall and miss a turn. The AI latches on to this, and explains how it could be implemented with "movement" and "danger" cards, as well as explaining how this system could work when you switch routes. Between us, we're getting there!

3 Brainstorm new mechanics

We work through a couple more ideas before ChatGPT asks whether we want to explore additional mechanics that we could add to the game. The AI comes up with several great ideas that add further depth to the game, including terrain obstacles or hazards on certain paths, and a slipstreaming mechanic where you get a movement bonus for being close behind another player. We discuss these ideas and what should happen if players land on the same "square" on the board, talking it through like you might do with a friend or colleague.

Suggest some additional mechanics we could add to the game

- Here are a few additional mechanics you could consider to add depth and strategy to your mountain biking game:
- 1. Energy Management:**
 - Energy Points:** Each player starts with a set number of energy points. Taking riskier paths or drawing danger cards consumes more energy, while taking safer paths preserves energy.
 - Energy Replenishment:** There could be rest areas or certain spaces on the board where players can replenish some energy.
 - Exhaustion Penalty:** If a player runs out of energy, their movement card values are reduced, forcing them to either rest or take safer paths until they regain energy.
 - 2. Terrain Obstacles:**
 - Hazard Zones:** Certain spaces on the board, regardless of path, could be hazard zones (e.g., rockfalls, narrow bridges). Players who land on these spaces must draw a specific obstacle card that either penalizes their movement or adds danger cards to their hand.
 - Terrain Modifiers:** Different terrain types could modify movement or risk. For instance, muddy trails might reduce movement even on the risky path, or rocky terrain could increase the likelihood of drawing danger cards.

I'd like to see your suggestions on structuring the board layout

- Here's how you could structure the board layout to incorporate the different mechanics you've mentioned:

Overall Board Layout:

- 1. Mountainous Slope Design:** The board could represent a mountain from top to bottom, with various paths snaking down. The paths would vary in length, with shorter, riskier paths and longer, safer ones, all intersecting at different points. This gives players the option to switch between paths as the game progresses.
- 2. Path Types:**
 - Risky Paths:** These should be shorter and more direct, but include more hazard zones and terrain modifiers. They can have limited passing points to increase tension when players are competing for the same space.
 - Safe Paths:** Longer, winding routes with fewer hazard zones. These paths could have more passing points to allow more freedom of movement but offer slower progress.
- 3. Crossing Points:** Intersections where players can switch from one path to another. These are key decision points, encouraging strategy as players balance speed and risk.

4 Board layout

After we've settled on the major game mechanics, ChatGPT suggests it's time to think about board layout, so we ask the AI for its "thoughts" on what the board should look like. It runs through creating risky and safe paths down the mountain, creating passing points where players can overtake one another, "drafting zones" where players can slipstream one another, as well as a "final descent" where players can choose a high-risk path "filled with hazards and obstacles", or a safer, longer path. This final section would force "players to make a big choice for the final push to the finish line". That sounds like a great idea!

5 Write the rules

Having chatted through the various game mechanics and board layout options over the course of the conversation, it's time to pull everything together. So we now ask the AI to "write a set of rules for the game, which we can include on a printed sheet in the box". ChatGPT does a brilliant job of condensing our various conversations into a set of rules, even including some optional advanced rules, such as weather effects that can add another dynamic once players have mastered the basic strategy. It gets a couple of things slightly wrong, but they can be easily corrected.

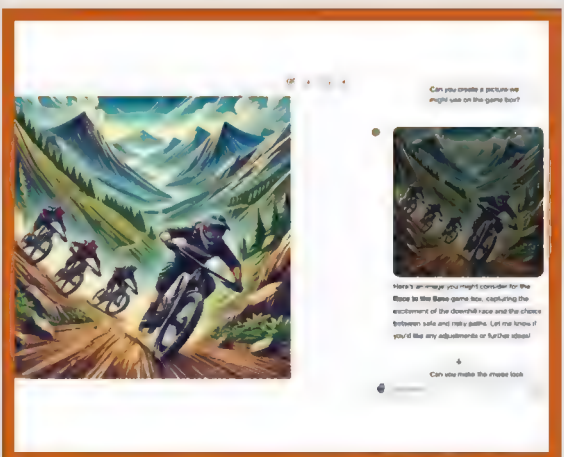
Mountain Biking Adventure: Rules of the Game

Objective:

Race from the top of the mountain to the bottom, choosing your route carefully to balance speed and risk. The first player to cross the finish line wins!

Setup:

1. Place the board on a flat surface.
2. Shuffle the movement card deck and place it face down in the center of the board.
3. Shuffle the danger card deck and place it next to the movement deck.
4. Each player selects a bike token and places it at the starting area at the top of the mountain.
5. Each player draws three movement cards to form their starting hand.



6 Brand the game

In the absence of a name, you can see from the rules above that the AI has called it "Mountain Biking Adventure", which is a thunderously dull name. So we ask it to come up with five alternatives, and we very much like the fifth suggestion: "Race to the Base". We also ask ChatGPT to come up with a slogan for the game, and after a bit of workshoping, the best suggestion is "Pick Your Path, Risk it All, Cross the Finish First". It's not great, but we can work at it. We even ask the AI to drum up an image that could go on the box, and it has a decent stab at capturing the thrill of racing down the slopes on a mountain bike.

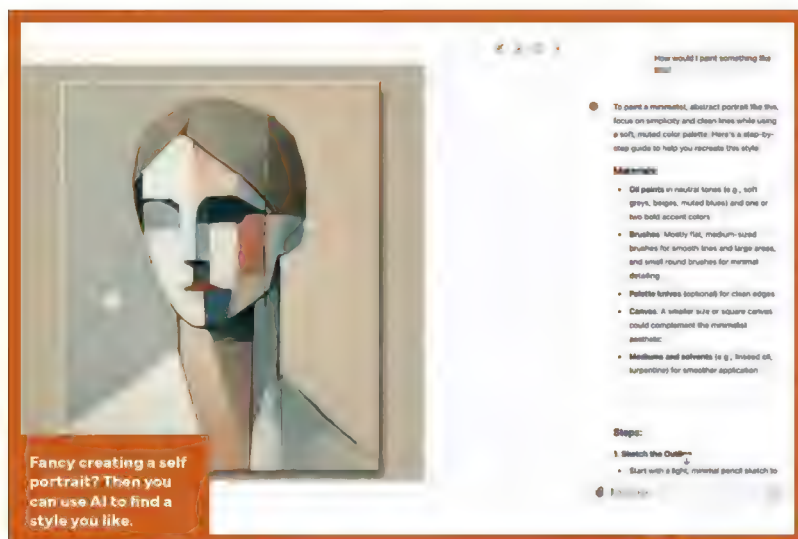
Painting and drawing

Work on your artistic skills with AI inspiration



If you're dabbling with painting or drawing, but aren't yet ready to brave the evening classes, ChatGPT can nudge you along the creative path. Whether you're painting or sketching, or even dabbling with digital arts on a tablet, the AI can help with your technique.

Don't think you're relying on purely text-based advice here, either. The AI can give you visual inspiration or identify artistic styles that you've seen in the real world. Here's how to give your art an AI lift.



PAINTING

If you want to try something new with your painting, why not see if the AI can provide some inspiration? For example:

I want to create an oil painting portrait in an unusual style. Can you draw something for inspiration?

ChatGPT should use its DALL.E drawing tools to create something for you to work with. If you don't like what it comes up with, ask it to "try again", until you eventually find a style that you're happy with. Once you've found something you'd

like to have a crack at, you can even ask the AI:

How would I paint something like this?

ChatGPT should now generate a series of step-by-step instructions on how to paint what it has imagined. The instructions for the style shown here included advice on how to sketch the outline, prepare the background with a muted tone. The AI then laid out how to block in the figure, and how to add one or two accent colours in specific areas, such as the edge of the face.

DRAWING

You could of course do a similar thing for drawing, asking the AI to create a style of sketch that you can attempt to follow. ChatGPT is also able to offer guidance on particular techniques, such as stippling or line work.


In addition, the AI is also useful for identifying styles of drawing that you might want to try yourself. Upload the image or take a photo of it with your smartphone camera and ask:

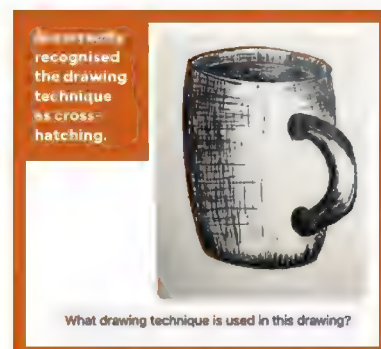
Which drawing technique is used in this drawing?

Here, it correctly identified cross-hatching (below) and you can ask the AI for tips on how to pull off something similar yourself.

ChatGPT can also help with more modern drawing techniques, using a tablet and digital pencil. For example:

How do I trace a photo using my iPad Pro and an Apple Pencil?

This delivered a step-by-step explanation of how to pull this off using layers in popular drawing apps such as Procreate or Adobe Fresco. It later provided advice on how to adjust the pressure sensitivity of the Apple Pencil, so that you draw thicker lines when you push down more firmly on the screen. 



Learn about famous art

Discover more about well-known art and artists



ne of the great things about the internet is the paths of discovery that you can

find yourself wandering down, in particular when it comes to the arts. An affection for one artwork can lead you to a dozen others from that artist or their contemporaries.

AI assistants make that discovery even easier, not only by helping you to identify the people behind the paintings, but also by broadening your knowledge of the artists. Here's how to start an art adventure.

IDENTIFY ARTISTS

If you see a print hanging in a friend's lounge or while you're out and about, and want to find more information on the artwork, ChatGPT's mobile app really comes into its own.

Open the mobile app, click the camera icon and take a photo of the art, then ask:

Can you identify the artist?

In our tests, we snapped photos of art by Roy Lichtenstein, Chaïm Soutine and René Magritte, and the AI correctly identified the artist every time, even though it failed to identify the particular artwork we had snapped.

That can lead into a little voyage of discovery, too...



DEEP DIVE INTO AN ARTIST

Once you've identified an artist whose work you're keen on, you can use ChatGPT's enormous brain to find out more about them and their art. Let's take Jackson Pollock as an example.

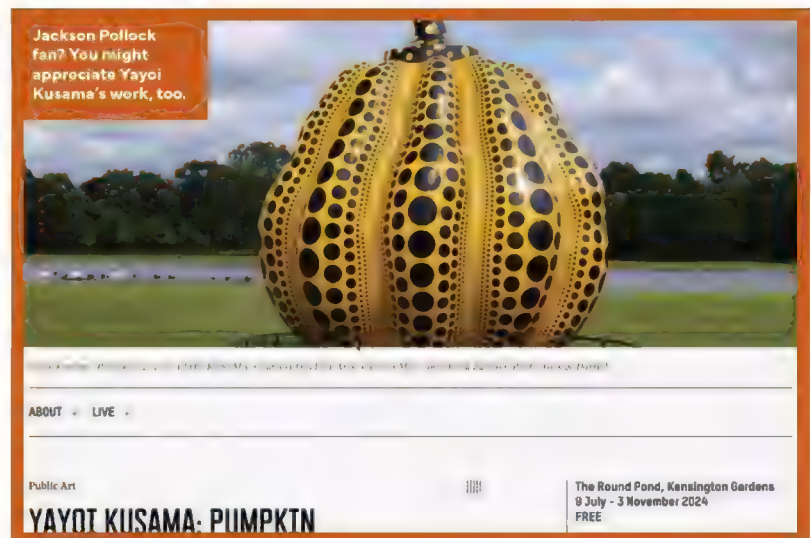
How did Jackson Pollock create his paintings?

Tell me about Jackson Pollock's personal life

If Jackson Pollock were alive today, which artists do you think he'd admire?

The first prompt here led to interesting descriptions of how Pollock painted his famously chaotic artworks by laying the canvas on the floor and dripping/flicking paint down on them.

The prompt asking for details of his private life generated a lengthy biography, covering his childhood, through to his battles with alcoholism, his troubled marriage with Lee Krasner, and his premature death in a car crash at age 44.



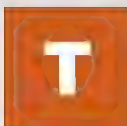
The final prompt was something of a wildcard, one we didn't think ChatGPT would even answer. However, it gave us a list of 10 artists that Pollock may have admired and the reasons why. The list includes Yayoi Kusama, because her "obsessive repetition, particularly her use of dots and infinity rooms, represents a fusion of art and personal psychology, much like Pollock's own exploration

of subconscious expression". A quick Google alerted us to her striking pumpkin installation at the Serpentine, and you can see why the AI (ahem) joined the dots between Pollock and Kusama.

If you're a fan of Pollock's work, you've now got 10 other artists to explore, opening up a series of rabbit holes for you to dive down and explore more great artworks.

A personalised exercise plan

Find an exercise plan to suit your lifestyle



here definitely isn't a shortage of advice on how to get fit out there; but, in most cases, it's unlikely to be specifically tailored to your level of fitness, desires or lifestyle.

However, feed ChatGPT information about your fitness goals, age, weight and time available to exercise and it can work out a bespoke plan for you. And not only will the AI create that plan, but it can adapt it as you progress over weeks or months.

It's worth running the AI's suggested plan past a fitness expert or medical professional, particularly if you haven't exercised in a while or you're looking to lose weight. But here's how to get a plan that's built for you.

AGE-APPROPRIATE ROUTINES

ChatGPT can drum up a fitness plan specific to your age, fitness goals and your availability, meaning you don't have to compromise or bend to suit generic exercise plans. For example:



I'm a 35-year-old man and want to lose a stone in weight over the next three months. I only really have time to exercise in the evenings after work. I have access to a gym. Can you draw up an exercise plan for me?

Obviously, you can adjust the prompt to your own circumstances, and you should seek professional advice about any exercise regime before starting, but this prompt delivers a set of alternating muscle-building and fat-burning exercises that we can fit into our evening schedule.

There's a detailed plan for each day; but if you're new to gym work, you might struggle to work out what exercises such as Romanian Deadlifts are. Of course, you can just ask ChatGPT for further guidance on any of the specific exercises. And if there are parts of the plan you want to adjust, ask ChatGPT to tailor the plan accordingly.

BUILD A REACTIVE GYM PLAN

It's all well and good having a plan in place before you go to the gym, but if our experience of the gym is anything to go by, unless you visit at 5am, then some of the more popular machines might be "unavailable" because there are teenagers shooting TikTok videos of their exercise routine on them.

So what if you need to adjust a plan on the fly? ChatGPT's mobile app can help you here:



My exercise plan says I should be using the prone leg-curl machine, but the machine is unavailable at my gym. Can you suggest an alternative machine that will help me with lower body strength?

With this prompt, ChatGPT provided several alternatives we could use to build lower-body strength, including both alternative machines and exercises such as kettlebell swings and stability ball hamstring curls, which might be more convenient if the gym is particularly busy.

Now there's no excuse for not getting the full range of exercises done!

MONITOR PROGRESS

ChatGPT is also superb at adapting long-term exercise regimes according to your rate of progress. For example, if we enter the following prompt:

I want you to help me track my progress on a couch to 5K project. I'm starting from scratch. I want to run 5K by Christmas.

ChatGPT responds by kicking us off with a week 1 plan that comprises of three 20-30 minute sessions for that week, including a warm-up routine, alternate periods of running/walking, and a cool-down period. The plan is to increase the running intervals every week until we're in a fit state to run the 5K in 12 weeks' time.

When you hit week 2, you simply return to that conversation from the left-hand menu on the website or the app and ask for that week's plan.

That's all fine and dandy, and the kind of plan you could get on any

fitness website. But what if training goes wrong? Say, you twist your ankle and need to rest for a week, where do you pick up from again?

If you keep returning to that same conversation in ChatGPT, you can keep the AI updated on your progress and have the plan updated as you progress.

I've injured my ankle and need to rest for a week. Can you please update my couch to 5K plan?

The AI asks whether we want to push back the deadline for running a 5K, or adjust our plan so that we still hit the required distance in time for Christmas – so it's like having a conversation with a personal trainer. The only thing you need to be wary of here is pushing yourself too hard, as the AI is a pleaser and will try to adapt to your commands.

You can keep giving the AI feedback on your progress every week, making adjustments to your plan accordingly.

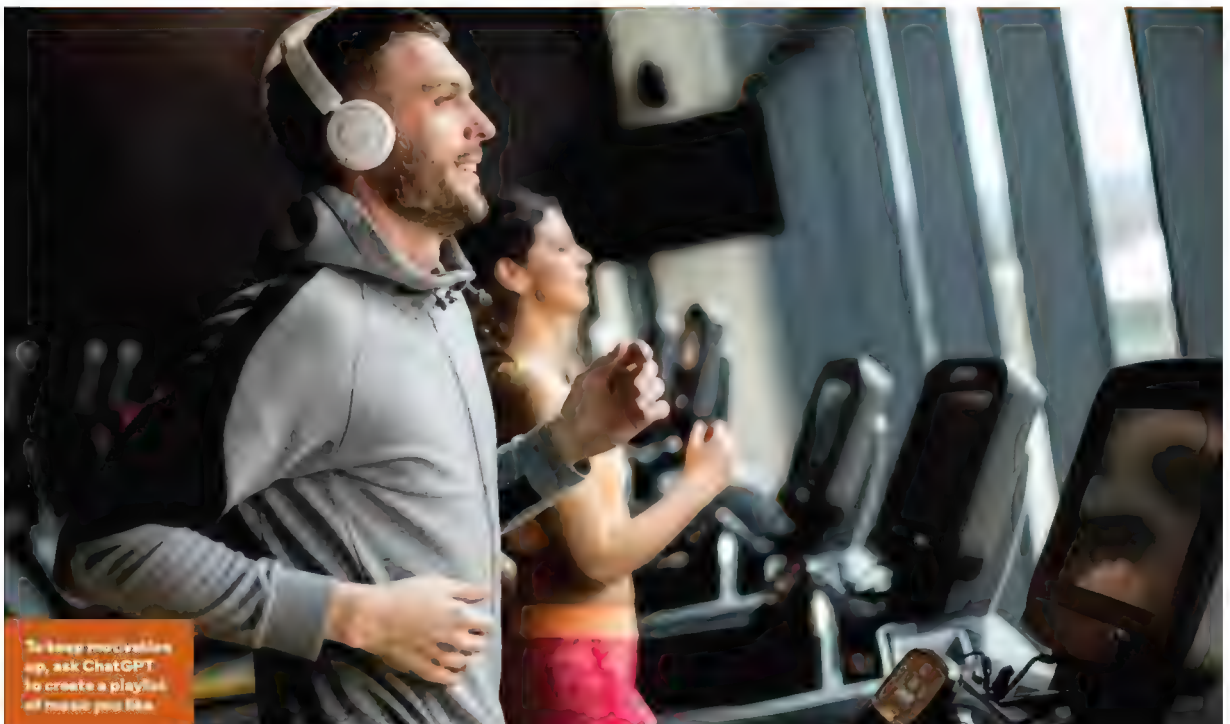
EXERCISE PLAYLISTS

Finally, you have to be some sort of monster to do a workout without music to pump you along. If you're fed up with your normal gym tunes, you can get ChatGPT to spice things up for you:

I'm going to the gym for an hour and want a high-energy music playlist. I'm a 90s dance fan. Can you create a playlist? Format the playlist with only artist and track name, do not number.

Why so picky about how ChatGPT formats the playlist? Because we want to copy the text of the playlist and bang it into www.tunemymusic.com, which can take plain-text playlists and convert them to actual playlists for Spotify, Apple Music, Deezer, Tidal and several other music services. 🎧

Keep returning to that conversation in ChatGPT and you can keep the AI updated on your progress, and have the plan updated as you progress



To keep motivation up, ask ChatGPT to create a playlist of music you like.

Build your family tree

Research back through centuries of your family history

➔ Poking back through your family's past can be an enormously satisfying project. Who isn't intrigued to know where they came from?

There are certainly no shortage of ways to research your family history in the internet age, with a plethora of online records, genealogy services and software available. But it still isn't a simple job to find all the right information or work the software, and that's where your AI assistant can step in.

Although it may offer to do so, ChatGPT isn't the best place to build a family tree. It will have trouble storing all the information you'll want to log about your ancestors and it can't (reliably) draw the trees or graphs.

However, it can help with your family research, showing you where to find the relevant information, explore unusual naming conventions for foreign ancestors, and come to your aid to understand those family relationships. So that's what a second cousin twice removed actually means...

ChatGPT can offer guidance on the various genealogy software products out there, so you can pick a package that's right for you, as well as help you discover their various features and how to import and share family tree data. Some of these software packages can appear intimidatingly complex, but ChatGPT can help you find your way around.

The AI can also add colour to your family history. If you've tracked down an

ancestor who was a baker in the 18th century, for instance, it can provide a glimpse of what their life might have been like. And once you've collected all of your family tree data and exported it to a spreadsheet, ChatGPT can break down fascinating stats, such as the average lifespan of your ancestors or which family member lived the longest.

There's a near-limitless number of ways in which ChatGPT can assist with your family research, and our step-by-step guide introduces you to a variety of them, showing how the AI can help right from the very start of the information gathering process. If you've ever been keen to research your family history but didn't know where to start, here's how it's done.

1

Collect the right information

Half of the battle with a family tree is collecting the right information in the first place, and ChatGPT can give you a decent checklist of data that will prove handy. We asked: "What information should I gather for each family member in a family tree?" The AI gave us a long checklist, starting with the basics (full name, date/place of birth/death, and so on), right through to more obscure information that you might not think of collecting, such as any immigration details, religious affiliations or military service records. All of these can be used to help locate records.

What information should I gather for each family member in a family tree?



When gathering information for each family member in a family tree, it helps to include a mix of basic genealogical details and other personal information that makes the family history more meaningful. Here's a breakdown of the key information you should collect:

1. Basic Information:

- **Full Name:** Include first, middle, and last names (and any maiden names).
- **Date of Birth:** Day, month, and year.
- **Place of Birth:** Town/city, county, and country.
- **Date of Death (if applicable):** Day, month, and year.
- **Place of Death (if applicable):** Town/city, county, and country.

2. Family Connections:

- **Parents:** Full names of both parents.
- **Siblings:** Names and birthdates of any brothers and sisters.
- **Spouse(s):** Full name(s) and marriage date(s).
- **Children:** Full names and birthdates of children.

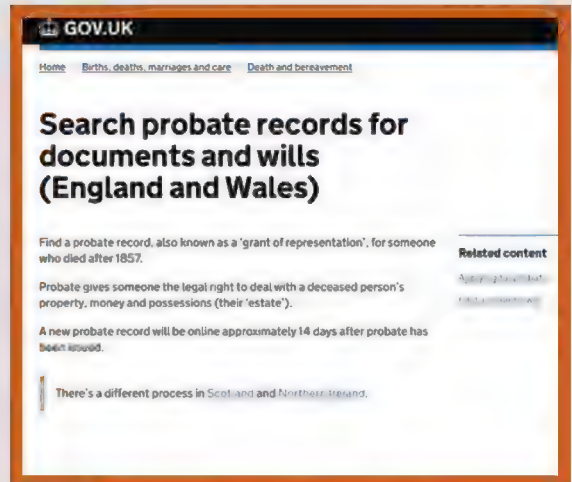
3. Marriage Information (if applicable):

- **Date of Marriage:** Day, month, and year.
- **Place of Marriage:** Town/city, county, and country.
- **Spouse's Details:** Include birth and death details of the spouse as well.

2 Create a spreadsheet

We'll come to dedicated genealogy software for recording data in a bit, but if you want to make a start on collecting data, it's handy to have a spreadsheet in which to log all the relevant information. You can also send that spreadsheet to other family members and ask them to fill it in, so you can add their info to your family tree. Having already established what we need to collect, you can simply ask ChatGPT (in the same conversation thread) to "create a spreadsheet into which I can enter the data listed above". Within seconds, you should have a downloadable spreadsheet pre-formatted with all the relevant fields.

	A	B	C	D	E	F	G	H	I	J
	Full Name	Date of Birth	Place of Birth	Date of Death	Place of Death	Parents	Siblings	Spouse(s)	Children	Date of Marriage
1										
2										
3										
4										
5										
6										
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17										



3 Research family history

Once you've badgered your living relatives for all their information, you may want to start searching historical records. ChatGPT can provide pointers on where to start your search. Asking "where can I find historical records for family tree research in the UK?" gave us a wealth of potential sources to start exploring, including genealogy websites, details on various government archives, links to sources of military records and even online probate records. It might well unearth sources of which you weren't aware.

4 Explore naming conventions

For any foreign ancestors, it can be tricky to work out naming conventions. Not every culture uses the forename/surname format that we're used to in the UK. ChatGPT can help you get your head around naming conventions, which can smooth the path of your research. For example, when we inform ChatGPT that "some of my ancestors are Russian. Tell me more about Russian naming conventions", we get a helpful explanation of the patronymic, a feature of Russian naming where a son takes his father's first name (say, Ivan) and adds the suffix -ovich or -evich to take the patronymic Ivanovich.

Summary of Naming Example:

- **Male: Nikolai Ivanovich Petrov**
 - Nikolai (First Name)
 - Ivanovich (Patronymic: son of Ivan)
 - Petrov (Surname)
- **Female: Anna Sergeyevna Petrova**
 - Anna (First Name)
 - Sergeyevna (Patronymic: daughter of Sergei)
 - Petrova (Feminine form of the surname Petrov)

Understanding these conventions will help you interpret names and connections in Russian family records more easily.



5 Help with family relationships

Once you've plotted a few branches on the family tree, you may become curious about your precise relationship to other family members. For example, "what relation would the daughter of my dad's cousin be to me?" That, ChatGPT informs us, would be your second cousin. And when we ask a follow-up, "what about the granddaughter of my dad's cousin?", we're told they're a second cousin once removed. Do keep up at the back! 🤖

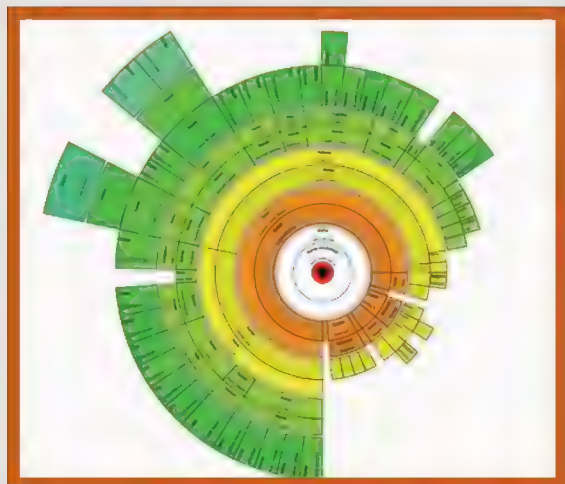
6 Choose genealogy software or service

Once you've collected a wodge of information, you'll probably want to start storing it in a genealogy package. This normally involves choosing between an online service available for a monthly fee, or software you can run on your own computer. We asked ChatGPT: "I'm looking for free software to help me create a family tree. Do you have any suggestions?" Among the recommendations was a package called Gramps, which works on both Windows and Mac – and is completely free to use, so we opted for that.



8 Import other trees

If you're working with other family members on your research, you might want to import their family tree into your software, so you can have a nose around. When we asked: "How do I import someone else's family tree in Gramps?", ChatGPT gives us instructions on how to add other people's data, normally stored in the GEDCOM format. It provides instructions on how to review the imported data and merge the information on any duplicates between the two sets of data, so you don't end up with the same people listed twice.



How do I add a new family member in Gramps?

To add a new family member in Gramps, follow these steps:

Step 1: Open Gramps and Select Your Family Tree

- Start Gramps and select the family tree you want to work on from the opening screen.

Step 2: Navigate to the "People" View

- In the sidebar, click on "People". This section allows you to view and manage all the individuals in your family tree.

Step 3: Add a New Person

- In the "People" view, click the "Add" button (or use the shortcut `Ctrl + N`).
- A new window will open where you can enter the details of the person you want to add.

7 Find out how to use software

Gramps is a hugely powerful package, but it's quite geeky; not the most approachable piece of software we've ever installed. Fortunately, as with most apps, ChatGPT can offer guidance on how to use it. For example, we asked: "How do I add a new family member in Gramps?". Its response included clear, step-by-step instructions, showing us how to add in both basic information and events such as birth, death and wedding dates, as well as how to connect them to other family members.

What should I do if I don't know exact birth or death dates for an ancestor?

If you don't know the exact birth or death dates for an ancestor, there are several strategies you can use to estimate or uncover these dates. Here are some steps you can take:

1. Use Approximate Dates

- Estimate Based on Other Known Information:** If you know approximate time frames (such as decades or approximate age at a certain event), you can use terms like "circa" (abbreviated as "c.") to indicate an estimated date. For example:
 - Born c. 1870 if you're unsure of the exact year but have an idea of the decade.
 - If you know when an ancestor got married or had children, you can estimate a birthdate based on typical age ranges for those life events.

2. Search for Other Documents

If you don't have direct birth or death records, look for alternative documents that might give clues.

9 Manage incomplete data

It can be difficult to nail down precise dates for events in your family tree, because records weren't kept or they've not been easy to hunt down. How do you deal with such incomplete information? When we asked ChatGPT what we should do if we don't know exact birth or death dates for an ancestor, it offered plenty of tips, including places to check for more accurate records, how to estimate birth/death dates to narrow down searches, and even advice on where to uncover the information from personal belongings, such as family bibles that have been passed down the generations, which often contain handwritten notes of birth/death dates.

10 Find missing ancestors

You may find that you have a named ancestor for whom it's difficult to find any official record. ChatGPT can provide tips on how to hunt them down. "I have an ancestor called Sheila Connaughty from Dublin, but I'm struggling to find official records for her. Can you help?" The AI suggests a range of variations on her first name and surname, which are always worth checking because regional dialects or transcription errors often mean names weren't always spelt the same way on official forms. For example, it tells us that the name Sheila is derived from Sile – so it's worth checking on that name, too.

I have an ancestor called Sheila Connaughty from Dublin, but I'm struggling to find official records for her. Can you help?

When you're struggling to find official records for Sheila Connaughty from Dublin, there are several strategies you can try to overcome common challenges in genealogy research. Here are some suggestions:

1. Surname Variations:

Irish surnames can have multiple variations due to regional dialects or transcription errors. For Connaughty, you might want to explore alternative spellings.

- Connaughton
- Conaughty
- Conaghty
- Connaighy
- Conahy
- Conaghy
- MacConnaughty or O'Connaughty (sometimes Irish surnames may include "Mac" or "O" prefixes in earlier records)

It's common for surnames to be misspelled, especially in older records where clerks wrote names phonetically. Try broadening your search to include these variations.

5. Challenges

Running a hotel in this period wasn't without its difficulties:

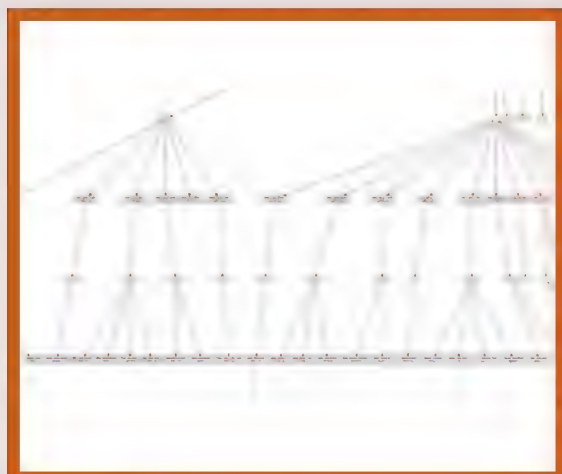
- **Unpredictable Guests:** Dealing with difficult or unruly guests, managing bookings, and making sure rooms were ready for incoming guests were all part of the challenges he faced daily.
- **Supplies and Provisions:** Procuring fresh food and drink in the late 19th century could be a logistical challenge, especially for hotels aiming to offer quality dining. He would have needed strong relationships with local suppliers.
- **Health and Hygiene:** This was a time before modern plumbing and sanitation, so managing the hygiene of the hotel would have been a major concern. Keeping the hotel clean and ensuring proper waste disposal was important to avoid illness and ensure guests returned.

11 Add historical context

Once you start reaching back beyond the modern day, it can be difficult to envision what life was like for your ancestors. ChatGPT can help provide a little colour, and maybe even reveal some information that could help with further research. For example, we asked: "One of my relatives was a proprietor of a hotel in Coventry in the late 1880s. Can you describe what his life might have been like?" It detailed the various industries that were cropping up in Coventry at the time, and how the city had been connected to the railway by then, potentially attracting guests, as well as some of the challenges of running a hotel at the time. It was (ahem) before modern plumbing, for example...

12 Share your family tree

So, you've put in the hard graft and found dozens of branches on your family tree. Now to share the family secrets with other members of the family. But how? "I want to share my family tree with other family members. What's the best way to do this with Gramps?" Obviously, you should change the prompt to whatever software package or service you're using; but ChatGPT talks us through various options with Gramps, including generating reports, creating a family tree website (that can hide sensitive details of the living), or exporting the GEDCOM file (box 8) we mentioned earlier.



What is the percentage of females in the entire data set?

The percentage of females in the entire dataset is approximately 27%. Let me know if you'd like more details or further analysis! (-)


List the five surnames with the most entries

The five surnames with the most entries in the dataset are:

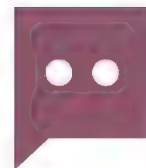
1. Warner – 112 entries
2. Boucher – 79 entries
3. Garner – 70 entries
4. Reed – 54 entries
5. Webb – 47 entries

Let me know if you'd like more information! (-)

13 Analyse your family data in ChatGPT

One of the export options from Gramps is a CSV file, which is basically a spreadsheet that can be read by ChatGPT. You can export all your family tree data, upload it to ChatGPT using the paperclip icon and start asking interesting questions, such as "which member of the family lived longest?", "what is the most common given name in the family?", and "what is the percentage of females in the family?". You could also explore average lifespans for people born in different centuries and lots more interesting facts. 





Set up a smart home

Having your household appliances and gadgets work at the touch of a button or via voice command is the dream, but the reality can be fussy setups and deciphering complicated jargon. Let ChatGPT show you a better way.

100 **Set up smart devices**

101 **Cut your electricity bills**

102 **Fix household devices**

104 **Boost home security**

106 **Plan and automate your smart home** **TUTORIAL**

Set up smart devices

Get help with setting up a secure smart home



here's no shortage of smart home equipment out there.

Everything

from light bulbs, to doorbells, to cat feeders, to radiators can be connected to your home network and controlled via an app.

The operative word there being "can". Smart home kit isn't normally smart enough to set itself up, meaning you might need help along the way. Indeed, before you even order kit, it's worth thinking about how it will fit into your home. Here's how AI can help.

PREPARING SMART DEVICES

Before you end up wasting hundreds of pounds and an untold number of hours trying to make smart home equipment work, it's worth using the AI to get advice on buying the right gear in the first place. For example:



I'm thinking of installing smart bulbs throughout my house. What should I consider first?



This generated lots of good advice on checking whether bulbs are compatible with your smart home system (ie. Alexa, Google Assistant), whether the bulbs need a dedicated hub, checking brightness levels, and many more valuable tips that might prevent shopping mistakes.

Buying the right kit is only half the battle; getting it to work once you've prized it out of the shrinkwrap is another matter entirely. Here, ChatGPT can be useful, especially because you can specify the exact devices you're trying to connect:



How do I connect a Hive thermostat to my Virgin Media Hub 3?

Can you help me set up Tapo smart light bulbs with Amazon Alexa?

On this second query, we were given step-by-step instructions on how to connect the bulbs via the Tapo app, then connecting that app to Alexa, plus a guide to the different voice commands we could use to, say, dim the bulbs to 50% brightness or change their colour.

ADVICE ON SETUPS

You may have seen smart home setups in other people's houses and wondered how you can pull off something similar yourself. ChatGPT is good at talking you through the options. For instance:



I want to have my home lights switch off when someone leaves a room. How can I do this?

The AI provides advice on a range of ways in which this can be achieved, including the use of motion sensors in combination with smart lighting systems, or using systems such as Amazon's Alexa to create routines to control both sensors and lighting systems to, say, switch off the lights after five minutes of inactivity.

Just be wary of taking advice on buying specific devices from ChatGPT, since its knowledge can be outdated. ☹

Cut your electricity bills

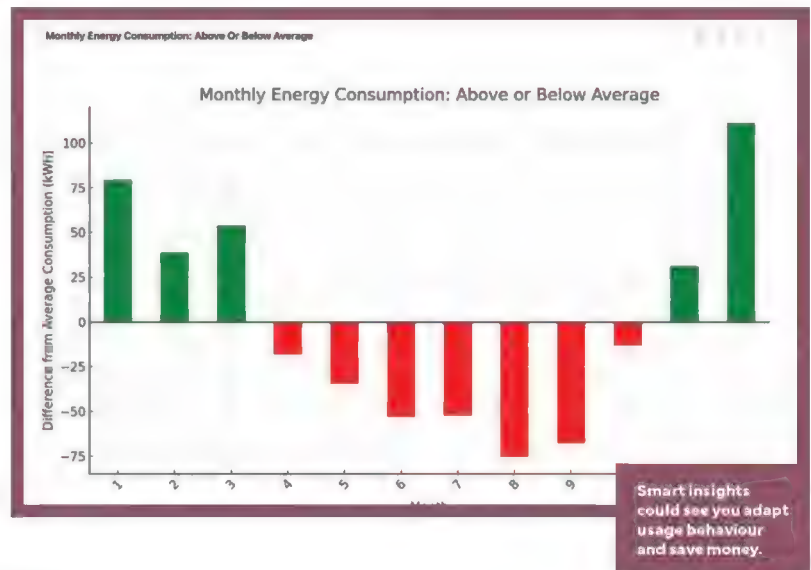
Analyse your energy consumption and make savings

S

mart meters have a bad reputation, but they can be exceedingly useful – not

least for revealing trends in your energy consumption. Once you can see precisely when you're chomping through electricity, it's often easier to make savings.

Here's how you can use ChatGPT's advanced analytical skills to give you insights into home consumption.



ANALYSE YOUR ELECTRICITY DATA

If you have a smart meter, there's every chance you can download your energy usage data from your provider's website. Octopus Energy, the UK's biggest supplier, lets you do this from your Energy Insights dashboard, for example.

Download the last year's data, and you'll get a huge spreadsheet of figures that even an Excel expert would struggle to manipulate. However, upload it to chat GPT and it will crunch through the data in no time, and be ready to provide useful insights. Start a new chat, and click the paperclip icon to upload your data. Then enter something like:

This is a spreadsheet showing my household electricity consumption between Sept 23 and Sept 24. Can you read it?

The AI should confirm it can read the data, and now you can start asking for smart insights, such as:

Graph average consumption per time of day, broken into 30-minute intervals.

Produce a graph showing how far above or below average my consumption is for each month.

Depending on your household's habits, these graphs can help identify electricity wastage. For example, if your summer month consumption is higher or not much lower than winter (when you normally need more energy for lights and heating), it's time to look at your consumption habits. Are you overusing a tumble dryer, for instance, when clothes could be hung out to dry in summer?

Likewise, if the graphs reveal that your energy consumption doesn't massively

drop overnight when people are sleeping, it's time to check how many devices you have running on standby, or if heaters are being left on needlessly. On the other hand, on some tariffs, energy is much cheaper overnight, so if you have an electric car or other high-consumption items, can you time them to be used overnight when rates are cheaper? Only when you've examined the data can you make sensible decisions.

ENERGY SAVING TIPS

ChatGPT can also help with tips on cutting bills.

How can I save on electricity in those high-usage winter months?

The advice provided includes tips that will be useful in a smart home, including zoned heating with smart thermostats, motion sensors to switch off unnecessary lights, and smart power strips to reduce phantom power usage. ☺

Examine your energy usage patterns with the help of AI.



Fix household devices

Need tech support in the smart home? Ask ChatGPT



Dealing with troublesome tech is a nightmare for many people, who would rather undergo

toenail removal surgery without an anaesthetic than fix a wayward printer. Thankfully, technology has – at last – developed the ability to fix itself. Well, sort of.

ChatGPT is often great at offering technical support. Whether it's showing you how to mend something, translating geeky error messages into something a human can interpret, or helping you keep gadgets up-to-date, it's a proper know-it-all.

Best of all, it can normally understand what you mean without needing a precise technical description. And if you get stuck halfway through a fix, you can ask it for more help, unlike the instructions on a page you've found on the web.

TROUBLESHOOTING KIT

ChatGPT can be a useful guide when things go wrong around the house, helping to troubleshoot problems with pieces of kit. For example:



There's a red light on my Amazon Echo Dot. What does this mean?

My MacBook won't charge above 80%. Why?

On the Amazon Echo issue, the AI correctly identifies that the red light means someone has pressed the microphone mute button on the device, meaning it will be unresponsive to voice commands.

On the second issue, ChatGPT notes that Apple has a battery health feature that prevents laptops charging above 80% if they're regularly plugged in order to preserve the long-term health of the battery. It also shows how to switch it off, if you need the laptop fully charged before heading out, for example.



DECODE ERROR MESSAGES

Error messages, particularly those spat out by Windows computers, are often impenetrable jargon that leave you none the wiser as to the actual fault. ChatGPT can help explain what the problem is in terms you might actually understand.

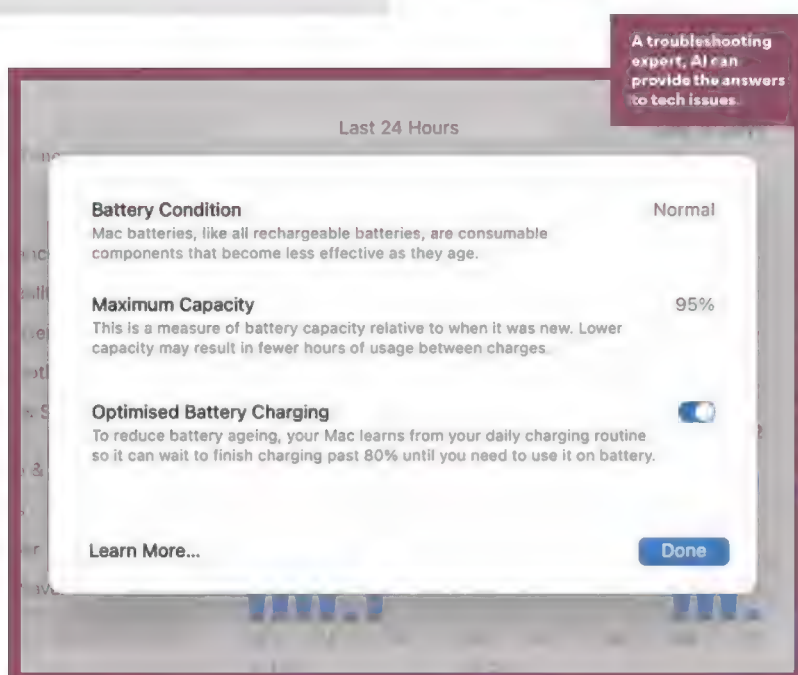
Take note of the exact wording of the error message, or even copy and paste the error message itself into Chat GPT, and then ask the AI to decipher it.



My PC just crashed with the error code "0x000000CA". What does that mean in plain English?

ChatGPT correctly diagnoses the error as a problem with the plug-and-play system. Erm... what does that mean? It goes on to explain: "In plain English, it means that Windows encountered a serious problem when trying to communicate with a device or driver, possibly due to a hardware conflict or a corrupted driver."

It suggests a series of fixes, including unplugging any newly added devices, restarting in Safe mode and checking for recent software driver updates (see far right). It can guide you through all these processes, if need be.



ROUTER PROBLEMS

In today's smart homes, your router is often the route of all evil. If something goes wrong with the router, all the other connected devices will normally turn into expensive doorstops, unable to do anything but sit there.

ChatGPT can be very helpful with diagnosing problems with routers and Wi-Fi connectivity, which might save you from six hours on the technical support lines with your broadband provider.

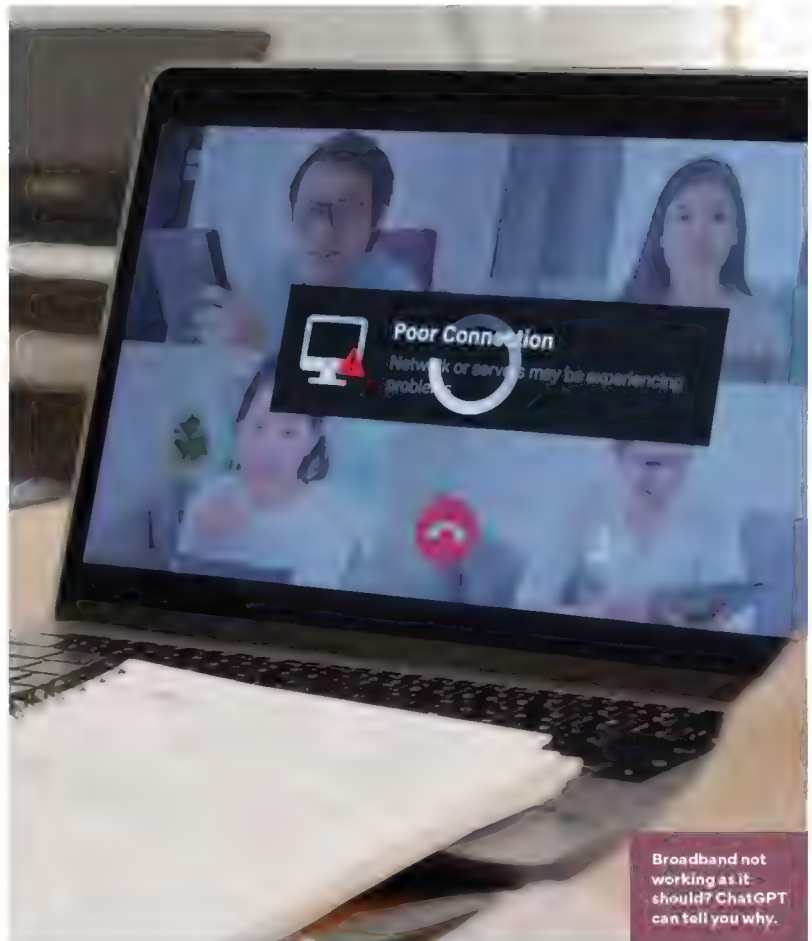
My broadband has become slow and the light on my BT Smart Hub 3 has gone white. What does that mean?

Now, in this specific example, ChatGPT didn't do a great job first time round. It came back with a rather generic answer about checking for Wi-Fi interference and positioning the hub in a more central location. So we pushed it to do its homework properly by asking it "check online for an answer".

With this kick up the backside, it went off and searched five tech sites, including BT's own, and discovered that the white light indicates that the regular broadband is down, and so the router is using a 4G mobile backup to connect to the internet. "This could be why your broadband is slow, since the 4G backup is typically slower than your normal broadband speed."

This is a good example of why you shouldn't always take the AI's first answer as gospel, particularly if you can see it hasn't checked online and relied purely on training data. You can tell if it's looked online in its original response because it will say "searched 5 sites" or similar above the response.

You shouldn't always take the AI's first answer as gospel, particularly if you can see it's relied purely on training data



RUNNING UPDATES

Updating computers and devices is a necessary evil of modern life, and can help dig you out of a hole when things go wrong. For example, devices you plug into your computer might need a new driver when you upgrade to an updated version of the operating system.

ChatGPT can guide you through the process if, for example, you're advised that you need to update your drivers for a printer, graphics card or other component.

the drivers, making the step-by-step instructions clear for anyone to tackle.

In one of its methods, it recommended downloading apps from graphics chip makers Nvidia or AMD to manage the drivers for you, and provided direct links to the relevant websites to download the software immediately.

If you're unsure about any part of the process or experience problems, you can always ask ChatGPT follow-up questions. For example:

How do I update the drivers for my graphics card in Windows 11?

How can I check my iPad is running the latest version of iPadOS?

My screen went on and off a few times during the driver update. Is that normal?

In response to the first question about upgrading the graphics card drivers, the AI provided four different ways to update

ChatGPT reassures us that it's perfectly normal for screens to flick on and off a few times during graphics updates, potentially saving us having to make a call to tech support. ☺

Boost home security

Make sure nobody breaks into your smart home



aving an all-singing, all-dancing smart home is smashing, but the more devices you add to your home, the greater the risk. That's because every smart home gadget is another potential target, and when we're considering devices such as video doorbells and security cameras, then these aren't the types of tech you want vulnerable to attack.

Tech security is never easy, but your AI assistant is a dab hand at it. ChatGPT can provide advice on how to fiddle with the settings of the specific devices you might have in your home, helping you navigate through the jungle of tech jargon that often accompanies device settings.

Here's how to raise your security game.



SECURE A SMART HOME

One thing you definitely need to consider if you're adding devices such as smart doorbells and video cameras to your home is security. You certainly don't want outsiders being able to view footage being captured in and around your home. ChatGPT can help with security tips here:



Explain how I can secure my Ring Doorbell so that people can't see my visitors.

The answer to this prompt delivers plenty of sensible advice from the AI assistant on how to turn on two-step authentication on your Ring account, so that someone attempting to steal your password has a further hurdle to jump over. Also included are tips on how to manage shared access with other family members, controlling "privacy zones" where the camera won't record, and securing your Wi-Fi network to ensure it's safe from intrusion.

CHOOSING STRONG PASSWORDS

One of the most common ways in which people let their guard down is by using insecure passwords or reusing passwords time and again for different devices/services. The proliferation of smart home gear means we need more passwords than ever, but if those passwords aren't "strong", you're potentially leaving very sensitive home equipment open to attack.

ChatGPT can help you get your passwords in order. The only secure way to use passwords is with a password manager, which will create strong, random passwords and remember them for you; far better than you trying to come up with 54 different passwords and trying to remember them all. (Tip: you can't.)

Many people are put off password managers because they can be quite intimidating, but ChatGPT can walk you through it:



How do I use the Bitwarden password manager?

Other alternatives include LastPass, Dashlane and Apple Passwords. ChatGPT guides you through how to install the password managers, create a strong master password, secure the password manager with two-factor authentication, and create strong passwords for each of your accounts.

Passkeys are becoming an increasingly popular alternative to passwords, but they can be difficult to wrap your head around. If you need a primer, ask:



Explain in non-techy terms how passkeys work



The AI can demystify some of the jargon you'll find in your router settings. It's a good way to learn more about your router's features

MANAGING YOUR FIREWALL

The security on most internet routers is pretty good these days, with built-in firewalls deflecting most of the serious intrusion threats. But firewalls can occasionally be a little heavy-handed, blocking access to legitimate applications – in particular, games.

Sometimes you might be asked to check that a certain port is open on your firewall to play a specific game. For many people, that's like being asked to find their way to Bradford without a satnav. ChatGPT can come to your aid:

A game says I need to have port 23456 open. How do I do that on my Netgear Orbi router?

This prompt resulted in a precise set of step-by-step instructions on how to open the router's settings, where to find port-forwarding options, and how to add a port-forwarding rule so that the router's firewall would no longer block access to the game's online servers. The AI might not have precise instructions for

every router, but it will normally provide enough information for you to be able to work it out.

The AI can also demystify some of the other jargon you'll find in your router settings, such as dynamic DNS, IPv6 and more. It's a good way to learn more about the features inside your router – although don't fiddle with these settings unless you're absolutely sure of what you're doing; if you get it wrong, it could knock out your internet connection.



GIVE SMART HOME DEVICES THEIR OWN NETWORK

Finally, if you're setting up a smart home with devices such as smart lights, thermostats, and so on, you might choose to put these devices on their own dedicated network. These smart devices often don't come with top-notch security, making them more vulnerable to hackers.

Many routers now have the option to create an "IoT" (Internet of Things) or "Smart home" network for such devices, which works a bit like a guest network. The network has its own name and password, and remains isolated from other devices such as PCs and laptops, meaning there's less chance of malware spreading to these devices if a smart home gadget is attacked.

If you need help setting up one of these networks, you can ask ChatGPT for help.

How do I set up an IoT network on my Virgin Media Hub 4?

This showed us how to create an IoT network using Virgin's guest Wi-Fi network facility, cleverly using this workaround because it doesn't have a dedicated IoT network. It also provided good advice on choosing the right Wi-Fi band for smart home devices and how to connect your different gadgets.

Beware that creating an IoT or guest network can raise the odd issue where certain devices can't see one another, but there's normally a workaround for this. ☹

Plan and automate your smart home

Use ChatGPT to get your smart home working perfectly for you

→ Think of a device in your house, and someone has probably made a “smart” version of it: fridges, light bulbs, cat feeders, radiators, and so much more. There almost isn’t anything that can’t be controlled via an app these days.

Things are far from simple, however. Competing standards, complicated set-up routines and fussy apps can sometimes make it seem like building a smart home is a particularly dumb and expensive thing to do.

Don’t be put off. If you buy the right gear, connect it properly and learn to use the full power of automations, smart home equipment can hugely improve

your home life and save you money on electricity and heating bills.

ChatGPT is smarter than any of the gadgets you might install in your home, and it’s perfectly placed to guide you through the knottier parts of planning a smart home and making everything work in harmony.

Not only can it help ensure you buy the right, compatible equipment in the first place, it can offer guidance on setting up those devices with your other AI assistants, such as Amazon’s Alexa, so that your lights, heaters and doorbell can be controlled by voice and programmed to respond in certain ways. For example, switching off your heating when you

leave your home, or automatically turning on lights in the hall when someone rings your doorbell.

For those striving to live in a Bill Gates-like smart home, Home Assistant is the way forward. This software can control hundreds of devices, making them work in harmony. It’s normally reserved for the more geeky members of society, but with ChatGPT’s guiding hand, you too can unleash the full power of smart home automation.

Below, we guide you through how to plan, set up and configure a smart home to your needs, starting with the basics and moving through the more advanced Home Assistant setups.

1 Buying the right kit

Before you splash out on smart home kit, it’s important to understand which devices work together. ChatGPT can help you get a grip on this. The best place to start is normally with the voice assistant platform you use – ie. Amazon Alexa, Google Assistant or Apple HomeKit. A prompt such as, “I have various Amazon Echo speakers and I want to buy compatible smart home equipment. What do I need to look for?” will offer advice on what to look for. In this case, the “Works with Alexa” label on new equipment or specific models of smart home equipment that ChatGPT lists. Always double-check answers before buying, though.

I have various Amazon Echo speakers and I want buy compatible smart home equipment. What do I need to look for?



When buying smart home equipment to work with your Amazon Echo speakers, you’ll want to ensure compatibility with Amazon’s Alexa ecosystem. Here are some key points to consider:

1. Alexa-Compatible Devices

Look for devices that are explicitly labeled as “Works with Alexa.” These devices can be controlled using your Echo speakers through voice commands, the Alexa app, or routines.

2. Smart Home Categories

Common types of Alexa-compatible smart home devices include:

- **Smart bulbs** (e.g., Philips Hue, TP-Link, LIFX)
- **Smart plugs** (e.g., TP-Link Kasa, Amazon Smart Plug)
- **Smart switches** (e.g., Lutron, Leviton)
- **Smart thermostats** (e.g., Nest, Ecobee, Honeywell)
- **Smart cameras/doorbells** (e.g., Ring, Blink, Arlo)

2 Understanding standards

When you start digging into smart home equipment, you'll soon come across various standards that these bits of kit use, such as Zigbee or Matter. It can be hard to work out what these standards do and mean, but ChatGPT can help. "Can you explain what Zigbee does in plain English?" ChatGPT explains that Zigbee is a wireless technology that allows different devices to talk to one another, even creating a "mesh network" where each Zigbee device can relay information to one another, extending reach if one device is too far away from the controlling hub. Neat.

Can you explain what Zigbee does in plain English?

Zigbee is a type of wireless technology that allows different smart devices to talk to each other and share information over short distances, typically within a home or office. It's commonly used in things like smart lights, thermostats, and security systems. The main idea behind Zigbee is that it uses less power and can connect many devices together without needing a lot of energy, so things like sensors and lightbulbs can run for a long time without needing constant recharging or big batteries.

It works in a way that lets all the devices create a "mesh network," where each device can relay information to others, making the whole system more reliable. Even if one device is far from the central hub (like a smart home controller), it can still communicate by bouncing the signal through nearby devices.

🔊 📱 🏠 🔄 📶

Can you help me set up my Tapo D230S1 video doorbell so that it works with Alexa?

To set up your Tapo D230S1 video doorbell to work with Alexa, follow these steps:

1. Install and Set Up the Tapo Doorbell

If you haven't already done so:

- Download and install the **Tapo app** from the Google Play Store or Apple App Store.
- Follow the in-app instructions to set up your Tapo D230S1 doorbell.
- Make sure the doorbell is connected to your home Wi-Fi network and working properly.

2. Enable the Tapo Skill in the Alexa App

To link the Tapo doorbell with Alexa, you'll need to enable the Tapo skill:

3 Setting up equipment

Setting up smart home equipment is normally pretty straightforward; getting it to work with other smart home equipment often less so. ChatGPT can help here with step-by-step instructions. Where possible, always use precise model numbers. For example: "Can you help me set up my Tapo D230S1 video doorbell so that it works with Alexa?" This delivered a five-step guide, showing how to connect the Tapo doorbell to Alexa, and also included instructions on how to tailor announcements when someone is spotted by the motion detector, and how to use video devices to see the front door.

4 Using basic voice commands

So, you've started gathering smart home equipment and you've connected it to your voice assistant. Now to start exploring the smart bits! ChatGPT can help you master the settings and voice commands you'll need to make stuff work. For example: "How do I switch my smart lights off with a voice command using Amazon Alexa?" The answer not only explains how to make it work with various brands of bulbs, but goes the extra mile with instructions on how to set up light groups, so you can switch off all the lights in your living room or the entire downstairs using a single command.

4. Assign Lights to Groups (Optional):

- You can group lights (e.g., "Living Room") by going to **Devices > Groups** in the Alexa app and adding the desired lights. This way, you can control multiple lights with a single command.

5. Use Voice Commands:

- To turn off your lights, simply say:
"Alexa, turn off [light name]."
If you have grouped lights, you can also say:
"Alexa, turn off [group name]."
Example: "Alexa, turn off the living room lights."

Once set up, Alexa will control your lights based on your voice commands!

How do I turn the lights and heating off with one voice command, say when I'm going to bed?

To turn off both your lights and heating with a single voice command using Amazon Alexa, you'll need to create a **routine** that combines both actions. Here's how to set it up:

1. Ensure Devices Are Set Up in Alexa:

- Make sure your smart lights and smart thermostat (e.g., Nest, Ecobee, Honeywell) are both connected to Alexa and functioning.
- Follow the device setup instructions for each product to ensure they're working in the Alexa app.

2. Create a Routine in the Alexa App:

1. Open the **Alexa app** on your phone.
2. Tap **More** (three lines) in the bottom-right corner.
3. Select **Routines**.

5 Create routines

Routines (Google and Apple have slightly different names for them) are where automation really starts to kick in. For example, let's say you want to turn off all the downstairs lights and the heating when you're ready for bed. How do you do both in one fell swoop? We ask ChatGPT that exact question and it explains how to create a routine in the Alexa app, so that a voice command such as "Alexa, goodnight" will switch off all the lights and heating. You can ask for instructions for Google, Apple or any combination of devices. 🛌

6 Deter burglars

So far, we've largely dealt with automations that you trigger with a voice command. But what about true automation, where the devices behave independently? For example, if you have a video doorbell and smart lights, you can have a light switch on in the hall/living room every time the bell is pressed or it detects motion. That might just be enough to make a burglar think twice. "How do I get my hall light to turn on automatically when someone presses my Ring Doorbell with Alexa?" delivers a step-by-step answer, including an optional step to add a further action that switches the light off after, say, five minutes, ensuring you don't waste electricity. It's an example of how the AI often goes beyond precisely what it's asked.

How do I get my hall light to turn on automatically when someone presses my Ring Doorbell with Alexa?

- To have your hall light turn on automatically when someone presses your Ring Doorbell using Alexa, you can set up a routine that triggers the light based on the doorbell press. Here's how to do it:

1. Ensure Ring Doorbell and Smart Light Are Set Up:

- Make sure your Ring Doorbell and smart light (e.g., Philips Hue, LIFX) are both connected to Alexa.
- Follow the setup instructions for each device in the Alexa app.

2. Link Your Ring Doorbell to Alexa:

- Open the Alexa app.
- Go to **Devices** > **Cameras** and ensure your Ring Doorbell appears in the list of devices.

12. Shopping and Calendar Integration

- Automate reminders or tasks based on your calendar or shopping list.
 - Example: Set reminders for events in your linked calendar to be announced by Alexa or sent as notifications to your phone.

13. Sound Detection Triggers

- Alexa can recognize certain sounds, like a baby crying, barking dogs, or the sound of breaking glass, and trigger actions.
 - Example: "Barking Dog" routine that turns on the TV or plays calming music when Alexa detects a dog barking, to help soothe your pet.

By mixing and matching these triggers and actions, you can create highly customized routines tailored to your lifestyle.

7 Explore advanced automations

It can be difficult to conceive of all the things you can do with smart home equipment. If you're running dry of ideas, ask ChatGPT for inspiration. "What advanced automations can I create with Alexa?" elicits a long list of suggestions, including scheduling announcements to take medication, arming house alarms with voice commands, plus sound-detection triggers that play a soothing soundtrack of music when a smart speaker detects a baby crying or the dog barking.

8 Introducing Home Assistant

If you're really serious about home automation, you'll find yourself hitting the limits of what Alexa, Google and Apple can do pretty quickly. Home Assistant (<https://www.home-assistant.io>) takes automation to the next level. It works with all manner of devices in the home, including solar panels, smart TVs, printers, as well as the more recognised smart gear such as lights, speakers and video cameras. It's a bit techy, but ChatGPT can hold your hand.

How do I install Home Assistant on a Raspberry Pi?

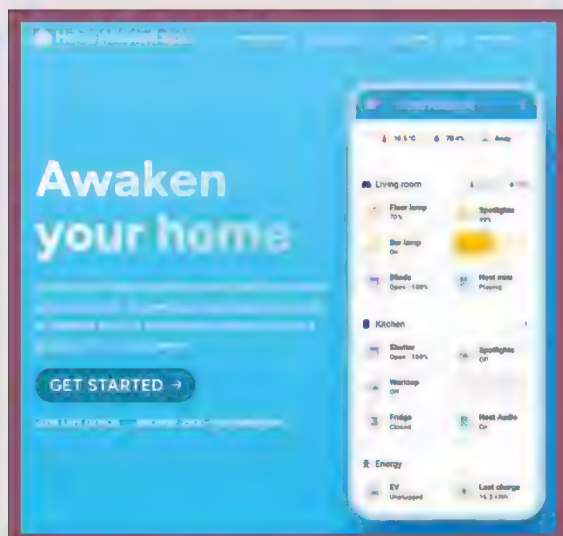
Installing Home Assistant on a Raspberry Pi is a great way to create a local home automation hub. Here's a step-by-step guide to help you get it up and running.

Requirements:

- A Raspberry Pi 3 or newer (Raspberry Pi 4 is recommended).
- A microSD card (32GB or larger recommended).
- A microSD card reader.
- A power supply for the Raspberry Pi.
- An Ethernet cable (for wired setup) or Wi-Fi capability.

Steps to Install Home Assistant on a Raspberry Pi:

- Download Home Assistant OS Image



9 Set up Home Assistant

Home Assistant can be installed on a range of hardware – or, better still, you can buy a Home Assistant Green hub from the company's website (around £75), which comes pre-loaded with the software. You just connect it to your router and access it via any computer or smartphone. If you decide to install Home Assistant on your own hardware (something low power such as a Raspberry Pi is ideal, since it needs to be running around the clock), you can ask ChatGPT for help with the installation process. For example: "How do I install Home Assistant on a Raspberry Pi?"

10 Create automations

There's plenty you can do with Home Assistant – and we can only touch upon it here – but one of the best features are “automations”. These let you do clever stuff like only charging the car when electricity prices are cheap, or turning off heating when you leave home. We want to create an automation that turns on an electric heater in our garden office when the temperature dips below 15°C, but only on weekdays between 8am–6pm. So we ask ChatGPT for a step-by-step on how to do this, and it provides wonderfully detailed, clear instructions, either using the Home Assistant interface or by writing a YAML configuration file for the more technically minded.

I want to create a Home Assistant automation that turns on my office heater when the temperature measured on my office weather station dips below 15C. But only between 8am–6pm on weekdays. Explain how I do this with step-by-step instructions.

Thought for a couple of seconds ~

Creating a Home Assistant automation to control your office heater based on temperature readings and specific time constraints involves setting up triggers, conditions, and actions within Home Assistant. Below are step-by-step instructions to help you achieve this, both using the Home Assistant UI and by directly editing the YAML configuration.

Prerequisites

1. **Home Assistant Setup:** Ensure you have Home Assistant installed and running.
2. **Office Weather Station Integration:** Your office weather station should be integrated with Home Assistant, providing a temperature sensor (e.g., `sensor.office_temperature`).

8. Optional: Add a Turn-Off Action

- To ensure the heater turns off when the temperature rises above 15°C, you can create a complementary automation or use a `climate` entity with setpoints.

9. Save the Automation:

- Click “Save” at the bottom right.

10. Test the Automation:

- Temporarily adjust the temperature sensor to below 15°C and ensure it's within the specified time and weekday to test if the heater turns on.
- Monitor Home Assistant's “Logbook” or “Developer Tools” to verify the automation triggers correctly.

11 Stop automations

Remember the point we made about how ChatGPT often goes the extra mile with instructions? Well, in the example above it also suggests creating a “complementary automation” that turns off the heater when the office reaches a certain temperature – a nice touch. This basically involves adding a second automation, as we did above; but ChatGPT also mentions the use of climate entities, which can control devices such as smart thermostats, helping you to manage the temperature in the home. That doesn't apply here, but it's an example of how ChatGPT can help you achieve more advanced temperature control than, say, Alexa.

12 Tap in to control devices

You might get the hang of controlling smart devices using the Smart Assistant app on your phone, or relying on automations – but not everyone in the home will. However, with Smart Assistant, you can create NFC or QR Code tags in your home to trigger automations. This means, for example, a child could simply tap a placed tag next to the thermostat with their phone to boost the heating for a couple of hours, instead of fiddling with the thermostat. NFC tags cost pennies each from Amazon, so it's a great way to make the home even smarter. “Show me how to use tags in Home Assistant” should deliver all the information you need.

What can I do with Tags in Home Assistant?

Tags in Home Assistant offer a wide range of capabilities for home automation and can be used in various ways to trigger actions and routines. Tags are typically **NFC (Near Field Communication)** or **RFID (Radio Frequency Identification)** tags, and they allow you to create custom interactions with your smart home devices. Here's a breakdown of what you can do with tags in Home Assistant:

1. Trigger Automations

- Tags are often used to trigger specific **automations**. For example, you could scan a tag to:
 - Turn on or off lights.
 - Start a morning routine (e.g., turn on the coffee machine, start playing music, etc.).
 - Lock or unlock smart locks.
 - Arm or disarm your home security system.

What are Home Assistant HACS?

Home Assistant HACS stands for **Home Assistant Community Store**, an integration that allows you to extend the functionality of Home Assistant by installing third-party custom integrations, themes, plugins, and other resources created by the community.

Here's a breakdown of what HACS offers:

1. **Custom Integrations:** These are additional device or service integrations not officially supported by Home Assistant. They enable new functionalities, allowing users to connect more devices or services that may not be natively integrated.
2. **Themes:** You can customize the look and feel of your Home Assistant dashboard by installing custom themes. This lets users modify the UI colors, fonts, and other design elements.
3. **Plugins (Frontend Elements):** Plugins offer additional frontend features such as custom cards or dashboards. They enhance the way users interact with the interface, making it more flexible and tailored to individual needs.

13 Code your home

As we said earlier, Home Assistant is hugely sophisticated. For example, using the Home Assistant Community Store (HACS) you can control devices not officially supported by Home Assistant, or even create scripts in Python to create custom home automation rules. Again, if you need more explanation of how to install HACS or what you can do with it, ChatGPT stands ready to answer all your questions and make your home even smarter. ☺





Build your own chatbots

GPTs enable you to tailor ChatGPT to any task to make it more straightforward. What's more, you can share your new GPT with the public – and if it proves popular, it could even earn you some money. Let's see how it's done.

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Planning your own chatbot

Like the idea of building a custom chatbot? Here's what you'll need



ChatGPT is a versatile beast. We've filled this guide with the many different things it can do, and we've barely scratched the surface.

However, sometimes you might want the chatbot to focus on a specific task, to behave in a particular manner, or be trained on data to which it wouldn't normally have access. In these instances, it can often be beneficial to create your own chatbot, or GPT as they're somewhat confusingly called in ChatGPT.

GPTs are chatbots tailored to particular tasks. That might be to help you use a particular device (say, a new camera), or keep you abreast of developments at your favourite rugby club, or help you learn the rules and best strategies in a video game, or practically anything else that comes to mind.

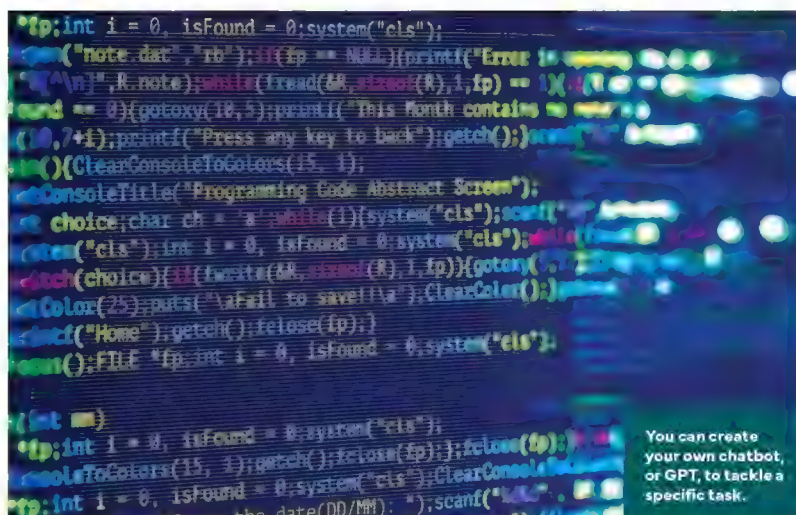
ChatGPT Plus subscribers can create as many GPTs as they like and even share them with other people. So here's how to plan your own GPT, before we get into the brass tacks of actually creating one.

WHAT DO YOU WANT IT TO DO?

The first thing you need to think about is what you want the GPT to achieve; what specific job it's going to be tasked with. It might be a GPT that helps you cook vegan family meals, or a chatbot that helps you to learn how to code in CSS, or a tutor to help your teenage child with their maths homework. There's an almost limitless number of roles to which a GPT can be assigned, especially if you're training the chatbot on your own data, which we'll come to later.

You also need to have an idea of how you'd like the GPT to respond. Do you want it to be concise and to the point? Do you want it to break everything down into plain English, so you're not bamboozled by tech jargon? Do you want it to talk to you like a professional – for example, assuming that you're comfortable with accountancy terminology if you're in the finance industry?

Also think about whether there are any set questions or prompts to which you'll want the GPT to respond. In the same way that ChatGPT has four suggested prompts every time you start a new conversation, your own GPTs can be pre-programmed with starter prompts. If there's a question you'll frequently ask, this is a good place to store it, saving you from having to type out the same query time and again.



PRIVATE OR PUBLIC?

Another key decision with GPTs is whether to make them private or public. When it comes to making them public, you have two options: available to anyone you send a link to or open to everyone in the GPT Store. If you choose to make it private, the GPT will only be available from your account.

Sometimes, that decision is taken out of your hands. For example, if you're training the GPT on, say, your company's

product brochure (be sure to check your company is happy with you uploading such data in the first place), then you may not want that information to be publicly available.

If your GPT is focused on a certain commercial product – say, a manual to help you use your new camera – then OpenAI may insist it remains private since it isn't allowed to redistribute someone else's intellectual property.

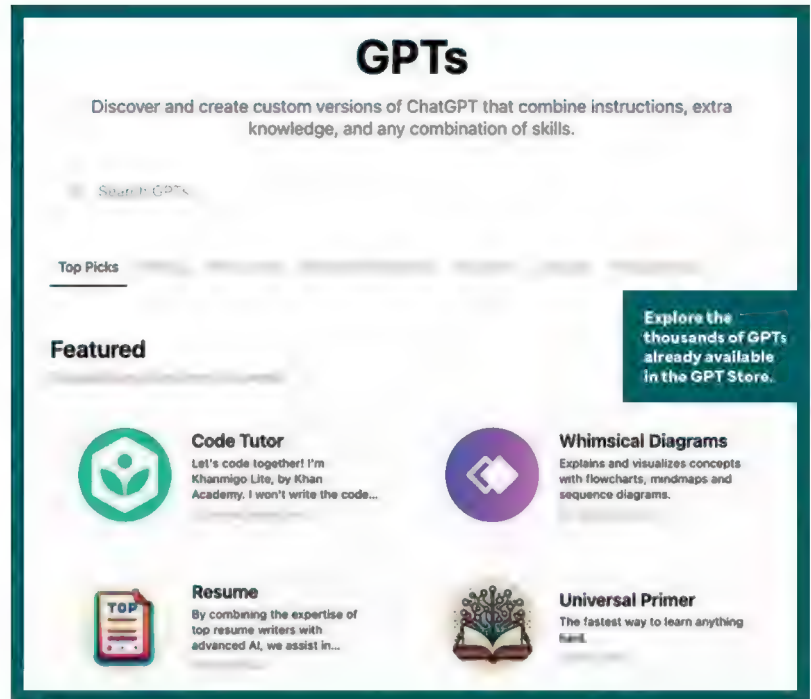
CHECK THE GPT STORE

Before you go to the effort of creating your own GPT, it's worth checking that someone else hasn't beaten you to it! The GPT Store now has thousands of different GPTs, so there's every chance someone has had the same brainwave and already created and made publicly available what you're looking for.

You can use any public GPT as if it's your own, and the data you enter into the GPT isn't shared with the creator (unless it's linking to an external service, such as a flight booking service, for example), so nobody will see what you're typing into their GPT.

To search the GPT Store, click Explore GPTs in the left-hand menu of ChatGPT. You'll find a homepage showcasing dozens of different GPTs in different categories, as well as a search box to hunt for particular bots.

We've got a guide to 15 of the best GPTs later in this chapter (see p120), if you need further inspiration.



From helping to cook vegan meals or guidance with maths homework, there's an almost limitless number of roles to which a GPT can be assigned




PREPARE A KNOWLEDGE BASE

The final thing you might want to do before starting to create a GPT is to gather the resources for any data you might wish to train the chatbot with.

You can upload text documents, spreadsheets and presentations in a variety of formats to train the GPT, and you can upload up to 20 documents per GPT. There's a hard limit of 512MB per file, however, and that's reduced to approximately 50MB for spreadsheets.

This training data could be used in all manner of ways. You could upload manuals for products and ask ChatGPT how to use them. You could upload a spreadsheet of stats from your football club's history and have a GPT that tells you who the top scorer was in a certain season. You could use it to train the GPT in the written tone in which you'd like it to deliver answers.

There are also advanced features where you can train the GPT to access information on the open internet; these will require some coding skills, though. 

Build your own GPT

Find out how to create a chatbot dedicated to a specific task

→ So, having read our guide to planning your own chatbot (see previous page), you're ready to get rolling with the creation of your own GPT. How best to do it?

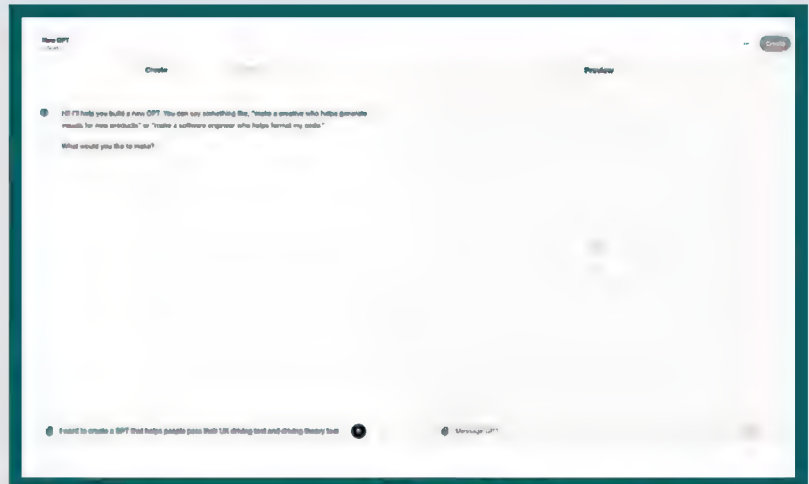
Here, we'll guide you through the process step by step, revealing how to get everything just right with your own chatbot, and showing you where to find some of the more advanced features.

We've built a range of different chatbots, including assistants dedicated to helping with individual cameras, printers and video games; through to more broadly themed chatbots that help simplify geeky tech language or give us a summary of the latest news about a favourite football team.

In this tutorial, we'll show you how to create a GPT that supports people with their UK driving test. We're using the Highway Code as a knowledge base for our chatbot, helping the AI to draw on official information when answering questions about, say, the speed limits on dual carriageways, or the difference between the various types of road crossing.

There's an enormous range of different uses for GPTs, but our guide will show you how to find all of the different features and how to train it on specific data, so you can focus on developing a chatbot tailored specifically for the task of your choosing.

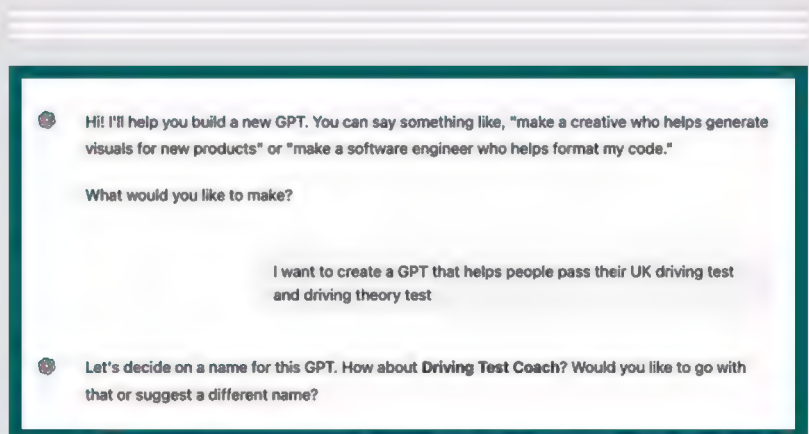
Even after you've been through all the steps and set your GPT live, that doesn't have to be the end of the matter. You can still keep updating, training and revising the corpus of information to which your GPT has access – we'll show you how to do that later in this section, while also revealing how you can share your custom chatbot with the wider world.



1 Create the GPT

To start creating a GPT, click on the Explore GPTs link in the left-hand menu and then click Create at the top of the screen. You should be presented with a screen split into two halves: the left half lets you create the GPT and the right half previews what it will look like. In the left half, click Create at the top (if

it isn't already selected) and answer the question about what you'd like to make. In our case, we enter the following in the "message builder" slot: "I want to create a GPT that helps people pass their UK driving test and driving theory test." Just give it a brief overview at this stage; don't dive into detail.



2 Name your GPT

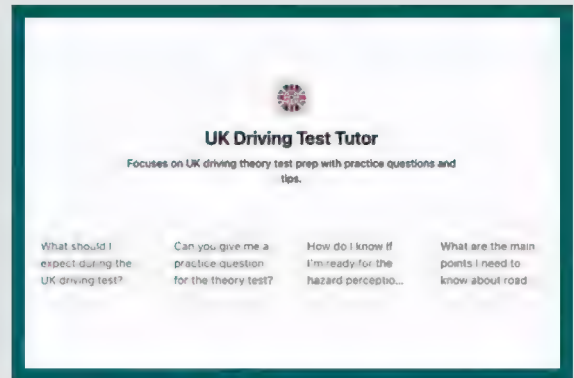
Once you've given the GPT Builder a rough idea of what you'd like to make, it will likely ask you to decide on a name for the GPT and even provide a suggested name itself. In our case,

it suggested "Driving Test Coach", but that could easily be confused with a driving test for coaches (ie. buses), so we tell the GPT Builder we want to call it "UK Driving Test Tutor".



3 Choose an icon image

Once you've settled on a name, the GPT Builder will automatically create a profile picture that will be used for your GPT. It's important to get this right, especially if you're planning to make it available to the public, because this will be displayed in the GPT Store listings. In our case, the GPT Builder created an icon with a steering wheel overlaid on the Union flag, which looks good. However, if you don't like what the GPT Builder comes up with then you can ask it to "try again", or even describe the icon you'd like to create until it generates something with which you're happy.

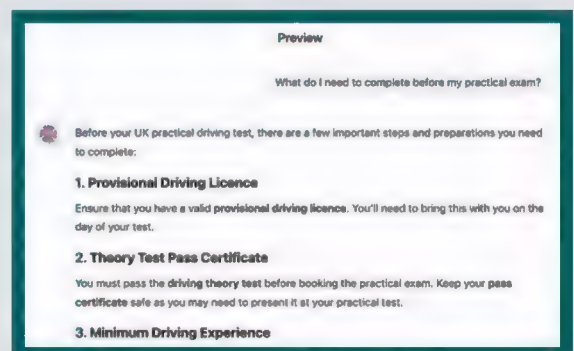
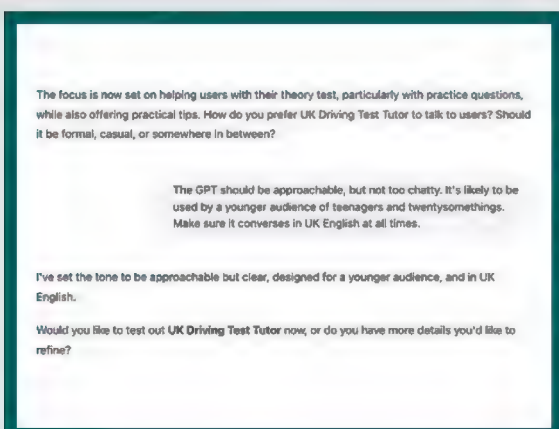


4 Define its purpose

Now the name and profile picture are settled, GPT Builder will likely start asking you questions about how you want the GPT to function. In our case, it's asking about whether we should prioritise theory or practical tips, or provide a bit of both. We reply: "I want to put an emphasis on helping drivers pass their theory test, in particular with test questions of the type they might face in the test itself. But the GPT may also offer practical driving tips." GPT Builder takes this on board, and now you can see that the description under the GPT's name has been adjusted to reflect our purpose. We can change this later, if need be.

5 Set the tone

Next, you'll likely be asked how you want the GPT to talk to users. Should it be friendly and chatty? Or should it be more formal? We want our driving tutor to be approachable, but not too chatty. We also tell the GPT that it's likely to be used by a younger teenage to twentysomething audience, to help it set the tone appropriately. Plus, we want to make sure that it converses in UK English at all times.

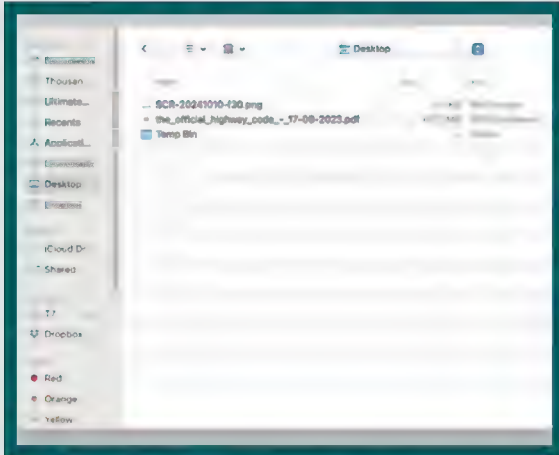


6 Start testing

Round about now, ChatGPT will likely ask something like "would you like to start testing your GPT, or do you have more details you'd like to refine?". There's definitely more details and settings we want to fiddle with shortly, but it's worth having a play at this point. That preview in the right-hand pane doesn't only show you what the GPT looks like, it's a live test. You can enter prompts into it and it will deliver answers. Enter a couple of prompts and see if it responds how you'd expect it to. ➡

7 Add knowledge

One of the great features of GPTs is that you can upload files to help broaden a GPT's knowledge (see previous page for more). In our case, we want to upload a PDF of the current version of the Highway Code, so that the GPT has an authoritative source of information on UK driving regulations upon which users can be tested. To add knowledge, click Configure at the top of the left-hand pane. Now click "Upload files" and select the file or files you want the GPT to refer to.

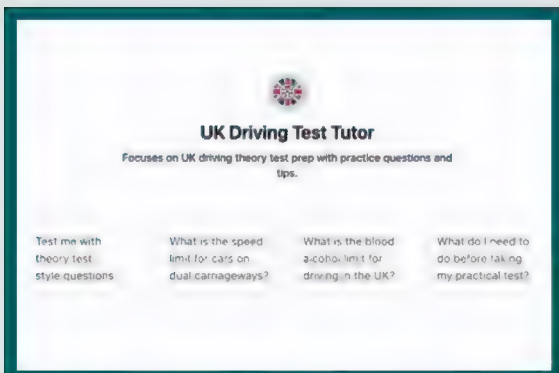


8 Tweak its capabilities

When you upload files, you might notice a section directly beneath that allows you to adjust your GPT's capabilities. There are three options here at the time of writing. Web browsing allows the GPT to search online; normally used when it's being asked for up-to-date information, or about something that isn't in the training data or knowledge you've supplied. You can turn DALL·E image generation on or off. In our case, we're worried it might be tempted to draw false road signs or road layouts, so we're switching that off. Code Interpreter & Data Analysis is most useful for computer coding projects or spreadsheet work, but can be helpful with uploaded files, too, so we're going to switch that on.

9 Set conversation starters

Also in the Configure menu, you'll see the option to edit "conversation starters". These are the four sample prompts that appear beneath the GPT's title and description in the preview window; they'll be the first thing your users see. They can help set expectations about what the GPT is intended to do. We're going to edit the starters to cover things we want the user to do, such as take a test on the kind of questions they might be asked in the theory test.



10 Advanced actions

We won't dive into them here because they're complicated and very specific to the type of GPT you're creating, but "actions" are potentially a very handy feature. They allow you to retrieve information or take actions outside of GPT. For example, if you run a holiday website, you may create an API that allows people who use your GPT to interact with your booking system, so you could ask a GPT to "book me a two-week stay at the Grand Hotel from 12th Feb" and it would automatically fill in the relevant form for the user. There are many other uses for these actions and it's worth clicking the Learn More link on the Actions page to get further information; but this will require coding knowledge.

11 Tweak instructions

Before we leave the Configure menu, you may notice a section called Instructions. This is a summary of the ways in which the GPT will behave. Some of the so-called instructions here can be inferred by the AI. For example, it's saying the AI should provide "hazard perception tips", even though we

haven't mentioned the hazard perception element of the test and it isn't really applicable here, since it's a video-based test that ChatGPT isn't equipped to handle. Feel free to edit these instructions to make them more accurately reflect what you want the GPT to do.

Description

Focuses on UK driving theory test prep with practice questions and tips.

Instructions

UK Driving Test Tutor helps users prepare to pass the UK driving theory test, offering a strong focus on theory test questions similar to those they will face in the real exam. It provides practice questions, explanations of key driving rules, road signs, and hazard perception tips. Although primarily focused on the theory test, it also offers advice on the practical aspects of driving and tips for the practical exam. The tone is approachable and clear, designed to resonate with a younger audience, such as teenagers and young adults. The language is straightforward but avoids being too chatty, and it consistently uses UK English.

Conversation starters

Test me with theory test-style questions

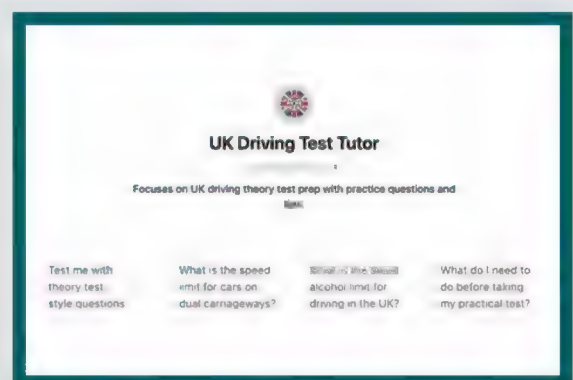
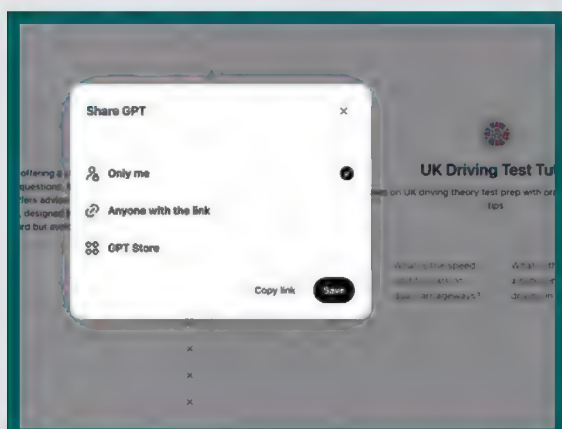
×

What is the speed limit for cars on dual carriageways?

×

12 Set it live

You can continue testing and tweaking the GPT until you're happy you've got it right, using either the Create or Configure menus in the left-hand pane. We'll talk more about training your chatbot on the next page, suffice to say that putting it live doesn't prevent you from making changes later. When you're ready, click the Create button in the top-right of the screen. You'll now have to decide if you want to make it a personal GPT available only to you, or whether you want to make it public, either available to anyone to whom you send a link or via the GPT Store. Note, you'll need to share extra profile details (such as your name/company name) if you decide to make the GPT public.

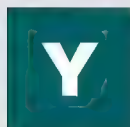


13 You're ready to roll!

Once you've set the GPT live, you should find that it appears in the left-hand menu of your ChatGPT homepage, ready to use whenever you want it. If you can't see it, click Explore GPTs > My GPTs, and it should be listed there with any other GPTs you've created. When you pressed the button to push it live, you should also have been shown a link to your GPT that you can copy and send to friends. We'll talk more about sharing and selling GPTs later in this section. [Go](#)

Train your chatbot

Find out how to improve the answers from your chatbot



ou've built your chatbot and you've started yabbering away. You might have

shared it with friends or colleagues, or even the wider public, and begun to receive feedback on its performance. How do you improve the quality of its responses or correct any flaws that you or others have noticed? With some good old-fashioned training!

Training a GPT doesn't mean dragging it into a meeting room for a PowerPoint presentation. It means going back into your GPT's settings and tweaking a few things. Here's how it's done.

TWEAK RESPONSES

Let's go back to our driving test GPT. We've noticed that when we ask for the type of questions we might face in the theory test, it's using a different question/answer format than they use in the official test. We can correct this. Open the GPT from the left-hand menu, then click on its name in the top-left of the screen; select Edit GPT from the drop-down menu. Then in the Create tab, beneath where it asks if there's anything we'd like to change, we type:

When someone asks for theory test questions, they should be given five questions. Each question should be multiple choice with four possible answers.

The GPT Builder processes our request and reports that our GPT has been updated. We can test whether the change has worked by asking for some questions

UK Driving Test Tutor
Published • Everyone

Create

Welcome back! Is there anything UK Driving Test Tutor should be doing better? Anything you'd like to change?

When someone asks for theory test questions, they should be given five questions. Each question should be multiple choice with four possible answers.

I've updated UK Driving Test Tutor to provide five multiple-choice questions, each with four possible answers, whenever someone requests practice questions. Let me know if you'd like any further adjustments!

Continue to fine-tune your GPT until it follows a format you're happy with.

Preview

Test me with theory test-style questions

Here are five UK theory test-style multiple-choice questions for you to practice:

1. What should you do if you're involved in a collision?
 - a) Drive away if no one is injured
 - b) Stop only if there's major damage
 - c) Stop and give your name and address to anyone involved
 - d) Keep driving to the nearest police station

in the preview pane on the right. It's now issuing questions in the correct format. And if we click the Configure tab, we can see the instructions have been automatically updated with: "When someone requests practice questions, it provides five multiple-choice questions with four possible answers per question." Perfect.

We can re-train the GPT in all manner of ways. We can ask it to make answers shorter or longer, to change the tone of the replies, or to provide everyday analogies to explain complicated concepts. Experiment with different requests until you get the responses you're looking for.

ADDING TRAINING DATA

You can also refresh or update the "knowledge" to which your GPT has access. In the case of our driving test GPT, if a new version of The Highway Code is issued, we'd want to remove the old version and upload the new one.

To remove files from the GPT's knowledge, enter the menu to edit the GPT as outlined above, and then click the Configure tab. Hover the mouse over any file currently listed under Knowledge and a little "x" should appear in the top corner of its icon. Click that to remove it. To add files to the knowledge base, click the Upload files button.

Sharing your chatbot

How to distribute and maybe even earn from your GPT



If you're proud of the chatbot you've created, you might want to share it with friends, colleagues or the wider world. ChatGPT makes it simple to do this, and you now no longer need to be a ChatGPT Plus subscriber to use other people's GPTs, meaning there are no barriers in the way of anyone using your chatbot.

Here's how to share your chatbot and – maybe one day – even earn a little money from doing so.

SHARING YOUR GPT

Assuming you've chosen to make your GPT available either to people via a link or in the GPT Store, getting the word out about your GPT is easy.

Each public GPT – whether or not it's in the Store – has its own unique link. You can find this by opening your GPT, clicking its name in the top-left of the screen, and selecting "Copy link" from the dropdown menu. That web address can now be sent to friends and family via email, shared on social media, or even embedded into your website.

There's one thing to note here: once that link has been created, anyone

can access your GPT. You might only send the link to trusted friends or colleagues, but they could pass it on to someone else or ping it across social media, so other people would have access to your chatbot.

As such, it's absolutely crucial that you don't include anything in the GPT or its training data that you wouldn't want exposed to the general public. If there's anything even faintly sensitive in the training data, you should change its share settings to "Only me". You can do this by selecting Edit GPT from the dropdown menu and clicking on the Share button.

UK Driving Test Tutor

- New chat
- About
- Edit GPT
- Hide from sidebar
- Copy link
- Send feedback
- Review GPT
- Report

Access your GPT's unique link so you can share it with friends and family.

CAN YOU SELL A GPT?

Even though OpenAI brand it as the GPT Store, you cannot (at the time of writing) put a price tag on your GPT, in the same way you might sell an app in the iPhone App Store.

However, the company is working on ways that the most popular GPT creators are rewarded for their endeavours with some kind of revenue-sharing scheme. At the time of writing, OpenAI is currently testing this system "with a small group of builders" in the US.

"Builders will receive earnings based on usage of their GPT," the company explains in a web page outlining the scheme. "Our goal is to partner with builders to develop and fine-tune our strategy for GPT monetisation, recognising and rewarding builders whose creativity and commitment have enriched the ecosystem."

Keep an eye out for announcements on the OpenAI website (openai.com) about the full launch of this scheme. 📢

Writing

1

Write For Me
Write tailored, engaging content with a focus on quality, relevance and precise word count.

2

AI Humanizer
#1 AI humanizer in the world! Get human-like content in seconds. This GPT humanizes AI-generated text with...

3

Humanize AI
Top 1 AI humanizer to help you get human-like content. Humanize your AI-generated content with Free credits...

4

Copywriter GPT - Marketing, Branding, Ads
Your innovative partner for viral ad copywriting! Dive into viral marketing strategies fine-tuned to your needs! N...

5

AI Humanizer Pro
Best AI humanizer to help you get 100% human score. Humanize your AI-generated content maintaining content...

6

CV Writer - the CV Expert
#1 CV Writing AI - An expert in crafting personalised, professional and humanized CVs optimised for ATS...

You could soon be rewarded if you create a GPT that proves popular.

15 Great GPTs

Need some inspiration for your GPT? Here are 15 to try first



f you're itching to create your own chatbot, but still aren't quite sure what they're capable

of, it's worth having a good poke around the GPT Store.

Here we've picked out 15 different GPTs of varying capability, which will not only provide inspiration for your own chatbots, but could come in useful on a day-to-day basis too!

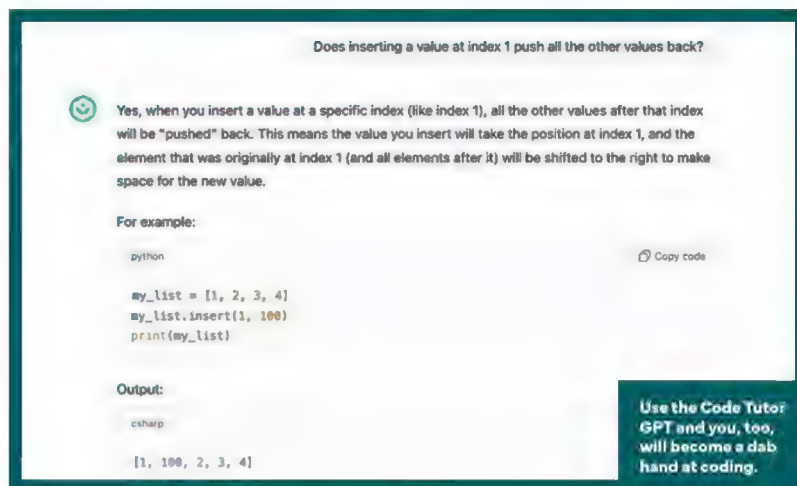
1 Wolfram

Wolfram is in many ways an antidote to ChatGPT's hallucinations, a reliable source of facts. So if you ask its GPT to state the population density of Peru, or tell you how many US presidents there were in the 20th century, it should deliver the goods.



2 Code Tutor

From the makers of the learning site, Khan Academy, Code Tutor is a terrific resource for anyone learning coding. It gives sparkingly clear explanations of coding concepts, such as how to use lists in Python, with formatted code snippets shown in answers to help you along.



3 VideoGPT by Veed

If you need a short social media video to promote a new business offer, Veed's GPT may be a strong starting point. The GPT helps you work up a concept and script, before sending it to the web service for completion. It's US-voiced and has its limitations, but it's fast and friendly.

4 Canva

Canva is a well-known web tool for creating eye-catching social media posts, flyers and much more. The Canva GPT lets you access the service directly from ChatGPT, workshopping what you want your message to say before you're presented with a selection of options. How about this one, for a 50% off sale at a fashion store? Not bad for six seconds' work.

5 Planty

A cracking example of a GPT tailored to a specific knowledge area, Planty helps you with any queries you might have about plants, such as which species will survive in an office with limited natural light, or which species might prove toxic to dogs if chewed.

6 Tech Support Advisor

This GPT is a bit like the chap you had to phone in the office when your PC went haywire, except without the 20-minute wait and the sarcasm. Need to convert a Google Doc to PDF or can't work out how to switch off data roaming on your Samsung Galaxy? This will help.

7 The Negotiator

Talking the boss into a pay rise or haggling a discount on a new car isn't easy for many people. The Negotiator offers tactics on how to deal with these situations, even entering into role play so you can practise a tricky conversation before you have it in real life.

8 AutoExpert (Chat)

This is an interesting concept, where you pose a question (say “Is the US on the brink of civil war?”) and it invites a panel of fictional experts to answer the question. For example, you might get the views of a “sociologist”, a “military historian” or a “constitutional law expert”, each providing different perspectives on the debate.

9 SciSpace

If you're conducting any type of scientific research (perhaps for a new business product) or you're just curious, the SciSpace GPT is an excellent starting point. Ask it about almost any topic and it drums through a library of published research papers, digging up cited information on your chosen topic.

10 Books

This is one to bookmark for any literature lovers in the house. It's at its best when recommending books similar to one you've enjoyed in the past, although it can also help with book summaries and plot explanations, if you've become lost in the middle of a novel.

11 Game Time

Need to brush up on the rules of a card game? Want some alternative rules for Monopoly to speed up the torture? Game Time is a GPT dedicated to helping you master the rules of card and board games, and is handy to have around when arguments break out!

• A) Ask **Political Sociologist** to further explain the role of economic inequality in civil conflict risk.

• B) Ask **Political Sociologist** how the media and social media contribute to polarization and conflict.

• C) Invite **Military Historian** to explore whether the U.S. military could fracture in a future civil conflict scenario.

• D) Ask **Constitutional Law Expert** about how the U.S. Constitution's checks and balances might prevent civil war.

Type /help for more

For a wide range of viewpoints on any topic of your choice, ask AutoExpert.

Thanks for pointing that out! Let me refine the text element for clarity and try again.

Here is the refined version with sharper text and improved clarity. Let me know if this meets your expectations or if you'd like any further adjustments.

No need to log on if you're looking for a sports club logo.

12 Logo Creator

If you're looking for inspiration for a logo for your business, sports club or other organisation, Logo Creator's a strong start point. It will ask you to describe the logo you're looking for, how complex the design should be on a scale of 1 to 10, and which colour scheme you'd prefer. The results might not be good enough to use right away, but could be polished into a striking logo.

13 Kayak

Kayak is a superb example of how AI can help with travel planning. Give the AI an idea of your ideal destination and budget, and it will provide advice on places to visit as well as help you book flights and hotels for your chosen dates. It saves fiddling around with web forms.

14 Universal Primer

If you've ever needed a clear explanation of photosynthesis or the offside rule in football, Universal Primer might just do it. It attempts to break down complicated concepts into clear language. It perhaps goes a little OTT with the simplicity, but you can be the judge.

If you love a story, DeepGame gives you full control.

"What do you do next?"

Ask Alvarez if she knows of any known criminals called JT

You glance at Alvarez, her face lit momentarily by the flickering light from a forensic technician's camera flash. "J.T.," you say, pulling the matchbook from your pocket and showing it to her. "This ring any bells for you? We know anyone who goes by that?"

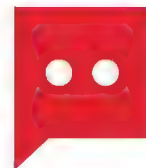
Alvarez furrows her brow, thinking hard. "J.T.," she mutters. She starts pacing, fingers running through her short, dark hair. "There's a couple of small-time thugs we've come across in the past, but nobody big enough to pull off something this clean."

She stops, her eyes narrowing slightly as if a name is just on the tip of her tongue. "Wait... There's one guy. Jake Torres. Used to run with one of the local crime syndicates a few years back. His crew got busted in a narcotics ring, but Jake—he slipped through the cracks. He's been quiet ever since. If he's back in the game, that could explain why we're seeing a hit like this."

15 DeepGame

Remember those Choose Your Adventure stories as a kid? Well, this is that in AI form, except here you really do get to choose how the narrative pans out, not just pick one of a handful of options. You can ask the AI to dream up a detective story, a war tale, a fantasy romp or to follow your own plot. It's tremendous fun. ☺





Take ChatGPT to the next level

If having scratched the surface of AI via ChatGPT you're hankering for more, we reveal resources to extend your knowledge, show you how to put AI to use in your daily life, and ponder where next for the technology.

124 **OpenAI's advanced tools**

126 **Build your own apps**

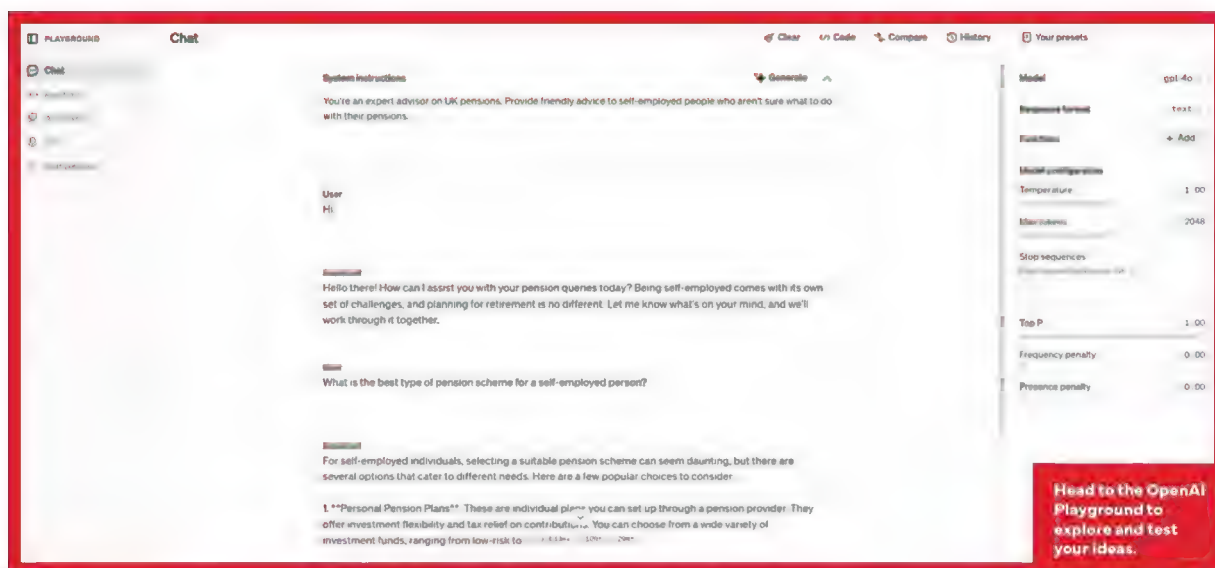
127 **Where to learn more about AI**

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OpenAI's advanced tools

If ChatGPT has given you a taste for AI, there's more on offer



nce you've spent a bit of time with ChatGPT, your mind starts fizzing with

possibilities. What if I could get AI to do this or that?

ChatGPT has its limitations: for example, you can't build it into your website or into apps you're developing. However, you can do that with the OpenAI platform, which allows you to use APIs to access a range of AI services built on the same technologies and models you've used with ChatGPT.

Using these tools, you could build a bespoke AI assistant into your website, for example, letting it answer customer queries based on your own product information. Or it could be used to transcribe the spoken word, perhaps to convert customer calls into written documents for follow-up.

Here's a short guide to some of the tools on offer.

ACCESS THE OPENAI PLATFORM

To gain access to these advanced tools, you'll need to sign up for an account with the OpenAI platform. This is entirely separate from your ChatGPT account, although you can log in with the same credentials (ie. Google) that you use to access ChatGPT. You'll find the option to sign up at: platform.openai.com.

The tools in the platform are charged for in a different way to ChatGPT. Whereas ChatGPT Plus effectively operates on an all-you-can-eat model for \$20 per month, the tools in the platform are charged for based on your usage.

Different tools and language models have different pricing structures, and this can be quite difficult to wrap your head around as a beginner. We don't have space to do a deep dive into the pricing structures here, but a simple rule of thumb is newer AI models generally cost more to access than the older ones.

Note that costs can escalate quickly, especially if you're using tools such as voice recognition, so take advantage of usage limits in the billing settings to ensure you're not charged more than a certain amount per month. Your tools will simply stop working if you run out of credit.

THE OPENAI PLAYGROUND

If you're new to the platform, the OpenAI Playground (platform.openai.com/playground) is a good place to begin exploring the capabilities of the platform.

In some ways, this is pretty similar to ChatGPT itself. You can text chat with the AI, hold a voice conversation, build "assistants" that are similar to GPTs, and so on. But you have much greater control over the output of the AI in the Playground than you do with ChatGPT, with users able to give the AI "system instructions" on how to behave and adjust variables such as the "temperature" (or creativity) of the output.

Crucially, anything you can achieve in the Playground, you'll also be able to pull off on your own website or apps, provided you follow the coding guidelines when accessing the API (see p126). So, if you have an idea of something you want to try with AI, but you're not sure if it can pull it off, the Playground is a good place to test your ideas.

Note that you'll be charged for anything you do in the Playground, so you may want to limit your experimentation.

LANGUAGE MODELS

Just as you can select from the various language models in ChatGPT, so can you do so when accessing them via the API. This means you can select the most cost appropriate language model for the job.

For example, if you're building a website chat assistant for your online retail store that you just want to handle relatively simple customer queries – how to process refunds, or where to find your physical stores, for example – then you might build the chatbot using the GPT-4o Mini model, because it's cheaper to access and provides snappier answers than the full-blown GPT-4o.

For more advanced reasoning tasks, you might need the newer o1 model, but that's going to be more costly. And if the public are accessing your chatbot, that could work out to be an expensive choice.

THE WHISPER MODEL

OpenAI's Whisper is a speech recognition system designed to transcribe and translate audio across multiple languages, which can also be accessed via the API.

This could be used for a variety of tasks. As well as providing real-time translation from one language to another, it can even transcribe the spoken word into text – which could be ideal for those who struggle with the written word.

It's pretty amazing how well the Whisper model accurately transcribes what people say, even when taking into account any “ums” and “ahs”, and even when background noise is present. It's expensive to use, though. As a guide, a three-minute conversation cost almost \$1 in our tests, so you may want to use it sparingly.

CODING TOOLS

The API can also be used to access coding tools. These can write code for you, translate code from one language to another, or explain what various parts of code do.

One common use for these tools in a business setting is to comment on and document code changes. This means that programmers don't need to go through the laborious task of documenting code themselves after each change, in order for colleagues who access the code in the future to know what's gone before.

CHECK OUT THE COOKBOOK!

If you want further guidance and examples of what the Platform tools are capable of, check out the OpenAI Cookbook: cookbook.openai.com. It's a collection of examples and guides for building tools with the OpenAI API. The collection is open source, which means you can take the examples shown here and adapt them for your own projects. 🍳

The Whisper speech recognition system can transcribe the spoken word into text – ideal for those who struggle with the written word

New APIs

Voice Translation into Different Languages



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Oct 21, 2024

Leveraging model distillation to fine-tune a model



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Oct 16, 2024

Introduction to Structured Outputs



Katia Gil Guzman

Aug 6, 2024

Introduction to GPT-4o and GPT-4o mini



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Michael Wu, Simón Fishman

How to stream completions



Ted Sanders

Question answering using based search



Ted Sanders, Mike He

The OpenAI Cookbook has plenty of suggestions for ways to use the API.

Build your own apps

How to access the API that makes the magic happen



If you want to start building AI into your own apps, you'll need access to the

OpenAI API. As we've explained on the previous page, anyone can access the API, but it's charged for separately from ChatGPT Plus, and it's charged on a pay-for-what-you-use basis.

Here, we'll show you how to sign up for the API, set spending limits, and build it into your own apps.

HOW TO GET API KEYS

Once you've signed up for an OpenAI Platform account at platform.openai.com, you'll have the option to create API keys. These are basically a long string of characters that you'll need for any app wishing to access the company's AI tools. As you'll see over the page, you can also enter API keys into other people's software and services to access AI tools from those.

Before you create an API key, if you're planning to work on multiple projects that use AI, you might want to create a

new project in your OpenAI Platform settings, so that you can assign a key to a specific project.

To create a new key, head to platform.openai.com/api-keys and select "Create new secret key". You can give the key a name (the name of the app or function it will be used for, for example), but remember to copy and paste the key into a secure place, since you won't be able to access the full key again for security reasons. If you lose the key, you'll have to generate a new one.

CONTROL BILLING

To make sure you don't accidentally run up enormous bills, it's definitely worth setting spending limits on your account. To do this, click the Settings cog on the OpenAI platform homepage and select "Limits".

Here you can either set a budget alert, which notifies you if your spend hits a certain threshold, or you can set a hard limit, after which subsequent API requests will be rejected and your apps will stop working. We strongly suggest newcomers set a hard limit, which can always be adjusted later if need be.

ADDING THE API KEY TO YOUR APP

We don't really have space to go into it here, but you'll need to store the API key in an environment variable on your system, and then reference that from your code. If you're creating an app to run locally on your computer, you'd typically store the key on your computer. ChatGPT can provide you with instructions on how to do this.

It's poor security practice to store the API key in the code of the app itself, since it might be accessed and misused.

Where to learn more about AI

Expand your AI knowledge with these resources



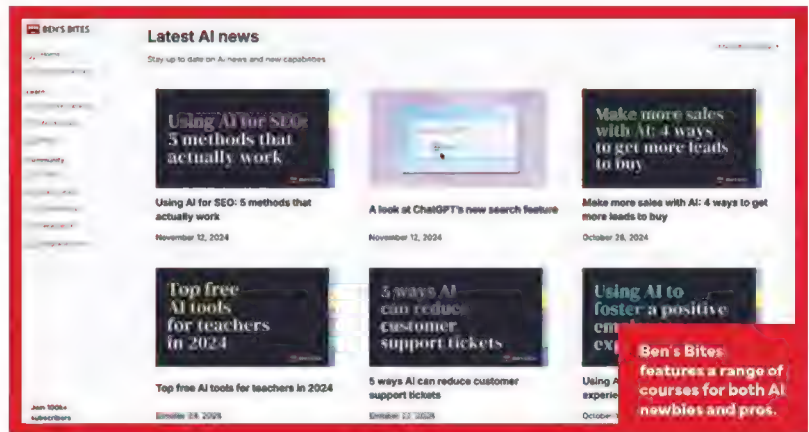
It barely needs saying that AI is a huge and rapidly expanding field, and that

ChatGPT is far from the only AI tool on the market. If you want to broaden your knowledge of AI, and even apply the skills you've picked up with ChatGPT to other AI services, here's where to start.

BEN'S BITES

bensbites.com

This site is a great resource for both AI newcomers and old hands alike. Its core business is a range of courses that normally deliver specific outcomes, such as "Create stunning images with Midjourney" or "Automatically respond to Google Business reviews". There's a strong selection of free courses, as well as paid-for options. It also has a great news section that covers the latest developments and product launches.



HARVARD AI COURSES

tinyurl.com/harvardaicourses

The world-famous university offers a range of AI courses – some of which are free, while others are paid-for. Among the freebies on offer is a self-paced eight-week course called Data Science: Machine Learning, through which you will learn how to build a movie recommendation system among other skills.

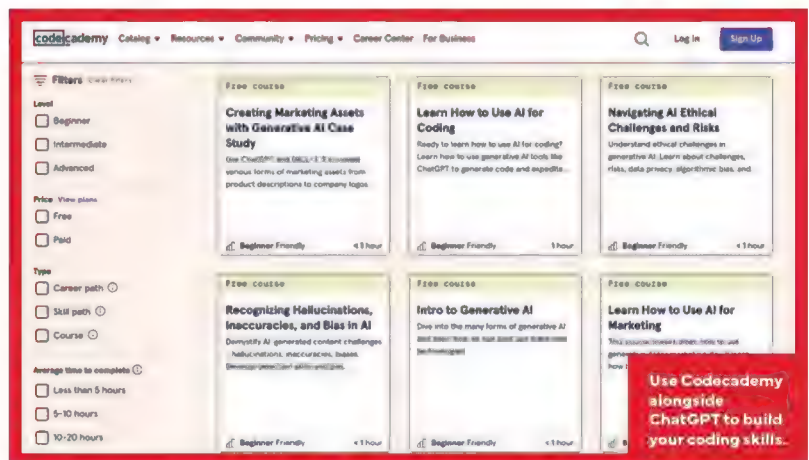
If you want a certificate to show you've completed the course, it will cost you £118 – but that feels like an unnecessary expense.

CODECADEMY AI COURSES

tinyurl.com/codeacai

Codecademy is a long-established source of great courses for coders. Naturally, it now has a huge range of options available for those who want to build their AI coding skills, many that will take only an hour or two to complete, others that are more in-depth and require 20+ hours and a site subscription.

The great thing about these self-taught courses now is that you can turn to ChatGPT for help if you become stuck, whereas previously you'd rely on community help or what you could find on the internet.



THE ALAN TURING INSTITUTE ON AI ETHICS

tinyurl.com/turingaiethics

Everyone who uses and develops AI systems should be aware of the ethical considerations surrounding its use. For example, AI systems are often a reflection of human biases because they're trained on a vast corpus of data created by humans. That means that AI systems can unintentionally exhibit racial bias, sexual discrimination and more. This paper from The Alan Turing Institute is intended for those designing AI systems for the public sector, but it's a good overview of how these biases creep into AI systems and the need to guard against them. [uo](#)

Automate tasks with AI

Find out how to make stuff happen automagically!



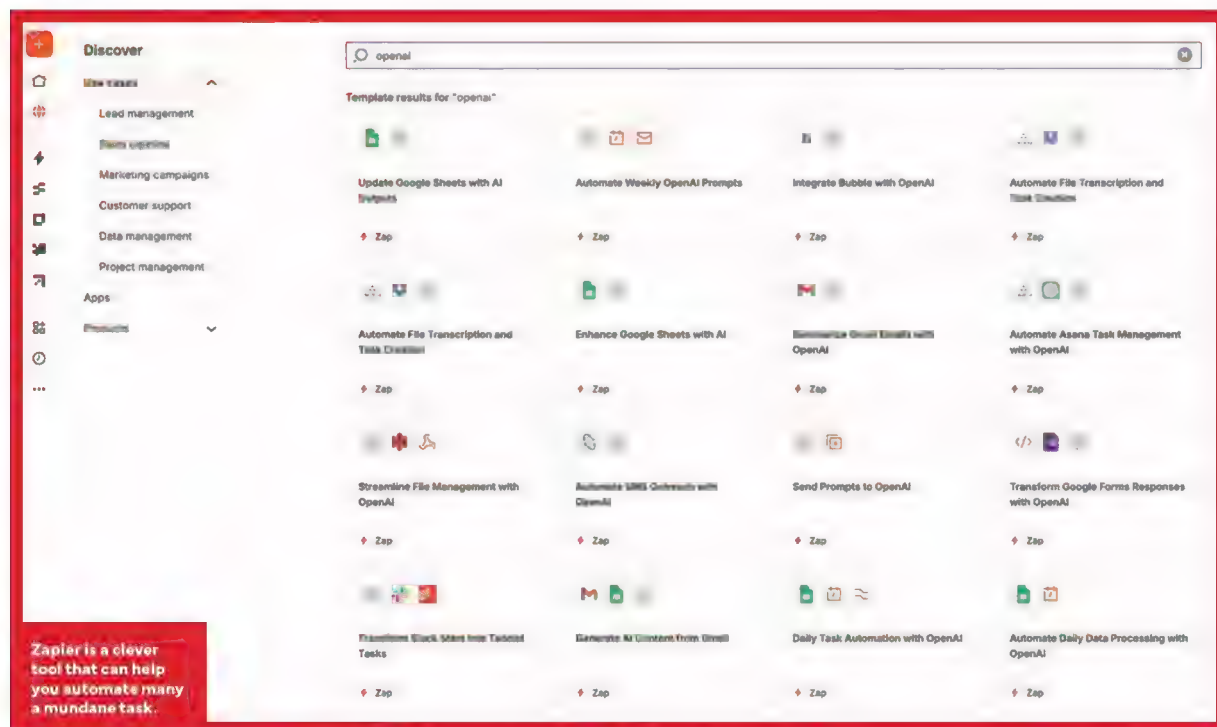
he great white hope of AI is that it will eventually relieve us of all the tedious tasks we have to do, allowing us to focus on the important stuff. Well, we'll still have to put our bins out, but there are definitely ways to automate tasks with AI

that reduce some of the drudge work of our day jobs.

Services such as Zapier.com allow you to design your

own automations, taking information fed into one app and pushing it into another, with a little AI help along the way.

Here's an explainer of the different types of tasks you can automate with services such as Zapier, and how you can get started with the service. Note that to make full use of the AI services, you'll need both a Zapier Pro account (£29.99 per month) and an OpenAI API key (see p126 for more information).



WHAT CAN YOU AUTOMATE?

Zapier is a hugely flexible service that connects dozens of different web services together. For example, it can read emails that drop into a Gmail account, use AI to summarise them, and ping the short summary into a spreadsheet.

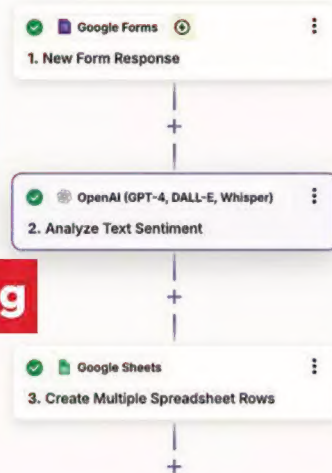
We've seen Zapier used for far cleverer jobs, too. For example, we know of a landscape gardener who

often finds themselves with a chainsaw in one hand or 30ft up a tree. They use Zapier to issue voice commands, say "invoice Mrs Jones for £350 for front garden renovation", or "add sharper clippers to my to-do list" and the AI automatically pushes the command to the relevant app, be that Gmail or a Trello to-do list, without the gardener having to touch a keyboard.

The beauty of a service such as Zapier is that people have often thought of the automations you want to achieve before you have, and have shared the recipes (or Zaps) for them on the service already. All you have to do is take their Zap and adjust it to your own needs. It's a no-code service, so you don't need to be a programming genius to pull any of this off.

You don't need to read through reams of feedback. AI can do it for you.

You can build your own Zap from scratch, but it's definitely worth checking if someone has done much of the work for you



HOW TO USE ZAPIER

The simplest way to use Zapier is to find a Zap that someone else has already created and adjust that for your own needs. You can build your own Zap from scratch, but it's definitely worth looking to see if someone has already done much of the work for you.

Here, for example, we've created a Zap that allows us to get a quick snapshot of written feedback from a photography course. When you run events or courses, you often send attendees a quick survey to ask them for their feedback, and that survey form might include a free textbox that allows them to say what they thought of the event. If you're receiving feedback from hundreds of thousands of attendees, it can be a big job to wade through all of those responses to discover what people really thought.

AI can simplify that job by taking the text from the form and either summarising it or giving you a quick sentiment analysis, to see whether feedback was negative, positive or neutral. All of this can be handled automatically, which means you can get a quick snapshot of how the event went down with attendees.

To do this in Zapier, we've built a three-stage Zap that does the following:

1 Looks for new responses added to a survey built in Google Forms.

2 Analyses the text response from the survey using OpenAI's GPT-3.5 model, to decide whether the free text feedback is "negative", "positive" or "neutral".

3 Adds that one-word sentiment analysis to a new row in a Google Sheet, allowing us to see at a glance whether or not the attendees are happy.

To achieve the above, you simply need to set up a survey in Google Forms, a Google Sheet to collect the sentiment analysis (you might even use the sheet that collects the full form responses), and configure a few settings at each step of the automation.

For the AI part of the Zap, you'll be invited to enter your OpenAI API key (if you haven't previously done so in Zapier) and choose which AI model you want to use, among a few other settings. If you wanted it to condense the free-text feedback from attendees into a short summary, it could do that too, and add it to the Google Sheet.

EXPLORING AUTOMATION

Zapier isn't the only player in town when it comes to automating tasks—although it's definitely the service with the most hooks into other popular business apps, such as the Google portfolio, Trello, Dropbox and many more.

You can, of course, also code your own apps to automate tasks. We've shown in previous sections how you can use ChatGPT to code your own apps in common languages such as Python, and they too can be used to access the OpenAI API and perform tasks.

We're not quite at the point where we can put our feet up all day and let the AI get on with the day job, but whether you're using automation services such as Zapier or creating your own apps, AI can definitely lift some of the burden from repetitive drudge work.

Note: just make sure you get your company's permission before you try this with any business data!



AI has progressed significantly over the past few years. Where next?

What the future holds

What's coming next in the fast-moving AI industry?

It's hard to think of a technology that has advanced as quickly as AI in the past three to four years. Those early ChatGPT models that had everyone gawping at their screens in near-disbelief now seem utterly mundane. So what do the next few years hold for the AI industry? Here are a few pointers to what comes next.

COMPUTERS CONTROLLED BY AI

If you can't work out how to do something on your computer, it's become entirely normal to ask an AI assistant such as ChatGPT and then follow its instructions on how to do it.

However, the next step is AI services taking control of the computer themselves, performing all the clicks necessary to do the job you asked for. AI firm Anthropic has already released a test version of its "computer use" capability, demonstrating its ability to perform tasks such as automatically filling out web forms using information stored on the computer or booking flights

using your computer's web browser. Google and OpenAI are also reported to be working on similar computer-controlling AI systems for release in early 2025.


However, letting AI effectively take charge of your computer raises fundamental safety concerns. Who takes responsibility if the AI does something wrong, or even illegal, while it's in control of your computer? Much like driverless cars, these liability issues will have to be worked through carefully before these computer-controlling AI services can be fully deployed.

THE PATH TO AGI

The holy grail for the AI firms is artificial general intelligence, or AGI. This is the level where AI systems are capable of performing any intellectual task that a human can.

Even with the amazing advances in AI that we've witnessed recently, that might feel like a distant dream (or nightmare, depending on how you look at it). But AI industry leaders think we might be creeping towards AGI in the near future.

Sam Altman, the CEO of OpenAI, has predicted that we could see AGI arrive as early as 2025. Others, such as Google's CEO of AI service DeepMind, Sir Demis Hassabis, thinks it could be as far as a decade away. Whoever is right, the advent of AGI will once again raise huge ethical issues, not least the risk of humankind being outsmarted by AGI systems, with its potential to act autonomously with unpredictable consequences.

To quote an extreme example, if AGI decides the best way to solve global warming is to eliminate humans, would we be capable of stopping it? A cheery thought to leave you with... 



THE ULTIMATE GUIDE TO ChatGPT



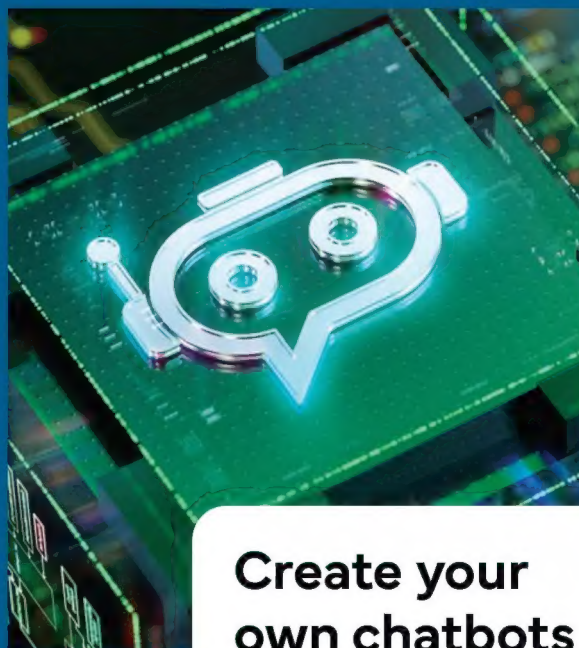
**Build a stunning
business website**



**Code your own
Wordle rival**



**Power up your
smart home**



**Create your
own chatbots**

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